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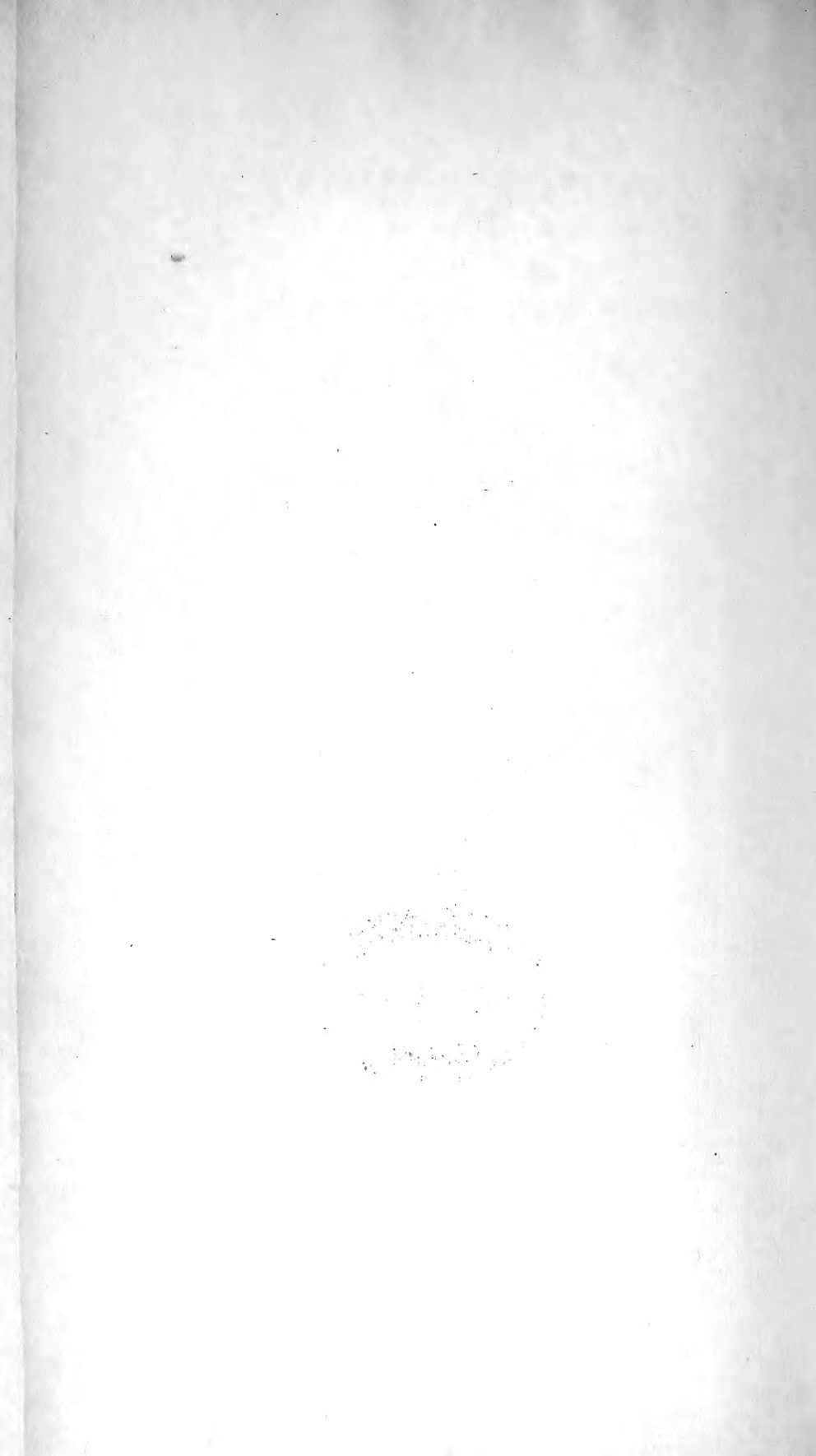
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# ILLUSTRATIONS

OF

# BRITISH ENTOMOLOGY;

OR, A

## Synopsis of Indigenous Insects;

CONTAINING

THEIR GENERIC AND SPECIFIC DISTINCTIONS;

WITH

AN ACCOUNT OF THEIR METAMORPHOSES, TIMES OF  
APPEARANCE, LOCALITIES, FOOD, AND ECONOMY,  
AS FAR AS PRACTICABLE.

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BY JAMES FRANCIS STEPHENS, F.L.S.

MEMBER OF THE ZOOLOGICAL SOCIETY, ETC.

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EMBELLISHED WITH COLOURED FIGURES OF THE RARER AND  
MORE INTERESTING SPECIES.

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MANDIBULATA.

VOL. III.

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"In his tam parvis tamque ferè nullis quæ ratio! quanta vis! quam inextricabilis  
perfectio!"—*Plin.*

"Finis Creationis Telluris est gloria DEI, ex opera Naturæ, per Hominem  
solum."—*Linné.*

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## ILLUSTRATIONS

OF

## BRITISH ENTOMOLOGY.

Subsectio 4.—NECROPHAGA, *Mac Leay*,

INCLUDES such Rypophagous insects as have the

*Mandibles* generally exerted and elongate: the *maxillary palpi* with the basal joint minute or evanescent, thence appearing three-jointed; the *maxillæ* with a double membranaceous process, the outer lobe often slender, sublinear; rarely articulated: the *elytra* frequently abbreviated; the *body* more or less elongate, depressed: the legs all gressorial: the *tarsi* with the number of articulations various, but most frequently pentamerous:

And the principal object of whose existence seems to be that of cleansing the surface of the earth from the remains of animal impurities, as that of the preceding section appears to be from vegetable remains; the conterminous genera in both sections subsisting upon putrid fungi or similar vegetable productions, while some few of the Silphidæ prey upon larvæ and living terrestrial Mollusca.

Antennarum capitulum plerumque	{	4-vel 5-articulato. <i>Mandibulæ</i>	{ ad apicem plerumque bidentatæ: 17. SCAPHIDIDÆ.	
			{ integræ: . . . 18. SILPHIDÆ.	
	{	2-vel 3-articulato. <i>Mandibulæ</i>	{ elongatæ, ad apicem sæpissimè emarginatæ. { articulo 3-o plerumque <i>Tarsi</i> dilatato-bifido: 19. NITIDULIDÆ.	
			{ articulis omnibus integris: . . . 20. ENGIDÆ.*	
			{ breves, crassæ: . . . 21. DERMESTIDÆ.	

\* In some of the Engidæ, a family that probably requires subdivision, the capitulum of the antennæ consists of more than three joints; while others'

FAMILY XVII.—SCAPHIDIDÆ, *Mac Leay*.

*Antennæ* generally longer than the thorax, distinctly thickened towards their extremities or somewhat abruptly clavate, the clava consisting of five joints, the second of which, or the eighth from the base, is generally smaller and frequently minute. *Palpi*, *maxillary* considerably exserted, subclavate or subulated. *Mandibles* generally bidentate at the apex. *Body* thick, subelliptic, much arched. *Head* immersed up to the eyes in the thorax, inflexed. *Thorax* trapeziform, convex, immarginate. *Legs* elongated, posterior sometimes nearly as long as the body: *tibiæ* subcylindric, usually unarmed, but with two spurs at the apex; tarsi pentamerous.

The insects of this family, although at first sight they appear very dissimilar, are evidently closely allied; they feed upon putrid or decaying animal and vegetable substances, and are very active: the following genera have occurred in Britain, and may be recognised by the subjoined external characters:

<i>Elytra</i>	{	<i>truncata. Scutellum</i>	{	distinctum: . . . . .	116. SCAPHIDIUM.		
				nullum: . . . . .	117. SCAPHISOMA.		
	{	<i>Thoracis angulis posticis</i>	{	<i>acutis. Antennæ</i>	{	breves, arcuatæ: . . . . .	118. MYLÆCHUS.
						{	elongatæ. <i>Elytra</i> {
							plus minusve striata: 120. CATOPS.
				obtusis: . . . . .	121. CHOLEVA.		

GENUS CXVI.—SCAPHIDIUM *Auctorum*.

*Palpi* filiform. *Antennæ* slender at the base, with an abrupt elongate club composed of five subhemispheric, nearly equal joints, the terminal one rounded at the tip: *head* produced anteriorly: *thorax* large, its sides margined: *body* stout, acuminate at each extremity: *elytra* margined, truncate: *scutellum* distinct: *legs* with elongate, subcylindric, smooth *tibiæ*.

There is but one indigenous species of this genus, which is readily known from *Scaphisoma* by the exserted scutellum, and its

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such as *Triplax* and its affinities, have the third joint of the tarsi dilated as in the *Nitidulidæ*, a gradual interchange of character usually observed on the confines of allied groups, where the series is tolerably perfect.

rufo-maculated elytra; exclusively of its greater bulk, and other comparative characters:—it devours agarics and fungi.

Sp. 1. 4— maculatum. *Nigrum, nitidum, elytris sæpissimè maculis quatuor rufis.* Long. corp. 2—2½ lin.)

Sc. 4. maculatum. *Olivier. Steph. Catal. p. 71. No. 773.*

Glossy-black; thorax somewhat coarctate on each side behind, with a transverse series of large impressed dots behind, its disc thickly punctate: elytra coarsely punctured, with a single sutural stria, continued at the base past the scutellum to the shoulders; on each two large red spots, the one at the shoulder curved, the other towards the apex and rounded: legs black; tibiæ striated; tarsi rufo-piceous.

β. Entirely black.

Not common near London, but more plentiful in the west of England; near Bristol it has occurred in considerable abundance; I have occasionally found a specimen or two at Coombe-wood in June. “Clingre, Glosters.”—*Rev. F. W. Hope.* “Not uncommon (near Swansea) on a fungous-like excrescence, which spreads itself under the bark of decaying oaks.”—*L. W. Dillwyn, Esq.*

#### GENUS CXVII.—SCAPHISOMA\*, *Leach.*

*Palpi* filiform. *Antennæ* pilose, the two basal joints robust, the rest very slender, with a slight club composed of five somewhat oval joints, the second smaller than the rest: *head* produced and narrowed anteriorly: *thorax* with its hinder margin produced into an angle in the middle: *scutellum* not visible: *body* robust, acuminate at each extremity: *elytra* truncate: *legs* very slender; *tibiæ* simple.

*Scaphisoma* is distinguished from *Scaphidium* by the apparent absence of a scutellum, and by having the hinder margin of the thorax produced into a lobe in place thereof; by the pilose antennæ, the club of which is composed of slender, somewhat oval joints, the second of which is smallest, and by the minute size of the insects, which feed upon fungi:—from the following genera of the family, the truncate elytra and boat-shaped form readily distinguish them.

Sp. 1. *Agaricinum.* *Nigrum, nitidum, levissimum, antennis elytrorum apice pedibusque pallido-brunneis.* (Long. corp.  $\frac{3}{4}$ — $\frac{5}{8}$  lin.)

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\* I am unacquainted with the *Scaphiosoma minuta*, *Curt.*; it is probably a brachelytrous insect allied to *Cypha*.

Si. Agaricina. *Linné*.—Sc. Agaricinum. *Steph. Catal.* 71. No. 774.

Black, shining, very smooth, antennæ, apex of the elytra and legs pale-brown or rufescent; elytra with a single stria near the suture, not produced anteriorly; apex of the body rufo-piceous.

Some specimens are of a paler hue than others.

Frequently taken among rotten fungi in Battersea-fields and in other places near London. “Wandsworth Common.”—*Mr. Waterhouse*. “Boletus of the Ash, Netley.”—*Rev. F. W. Hope*.

Sp. 2. Boleti. *Piceum læve glabrum, antennis pallidis, pedibus rufis*. (Long. corp.  $\frac{3}{4}$ — $\frac{5}{8}$  lin.)

Sc. Boleti. *Panzer*.—*Steph. Catal.* 72. No. 775.

Head, thorax, and elytra piceous, minutely punctured; the latter paler at the apex, with a single sutural stria: body beneath piceous; legs rufous; antennæ pale.

I very much doubt whether this be distinct from the last described, or that more than one species of the genus is found in Britain; the dissimilarity in the colour of the antennæ (which may arise from immaturity), and the paler general hue, being the chief points of distinction between the two.

Taken near London, and in other parts of the country. “With the preceding species.”—*Rev. F. W. Hope*.

#### GENUS CXVIII.—MYLÆCHUS, *Latreille*.

*Palpi*, maxillary with the basal joint subulate; labial with the terminal joint obtuse. *Antennæ* incurved, rather shorter than the thorax, the two basal joints distinctly stouter than the following, cylindric; the third a little elongate, obconic, the three following least, the fourth being cylindric, the fifth and sixth somewhat transverse; the remainder forming a five-jointed club, with the articulations transverse, the eighth, ninth, and tenth, being nearly equal, and the eleventh largest, with its apex rounded: *thorax* subtrapeziform: *tarsi* in the male with the three first joints dilated; *posterior femora* of the male with a small triangular acute tooth beneath.

The subincurved antennæ, with the two basal joints manifestly thicker than the three next, the eighth not in the slightest degree less than the other joints of the club, and the last obtuse at the apex, are the chief points of distinction between *Mylæchus* and the three following genera.

Sp. 1. brunneus. *Oblongo-ovatus, castaneo-brunneus subtilitèr vagèque punctulatus, breviter pubescens*. (Long. corp. 1 lin.)

My. brunneus. *Latreille*.—*Steph. Catal.* 72. No. 776.

Castaneous-brown, clothed with short flavescent-griseous down, finely but irregularly punctulate; head black; thorax slightly compressed anteriorly, dilated and nearly as wide again, with a straight margin, posteriorly: elytra twice as long as the thorax, rather narrow, and perceptibly narrowed from the base to the apex, which is rounded; near the suture is a single stria, and another on the margin; legs pitchy-brown.

A rare species, which has been only three or four times met with in the north of England, whence I have recently obtained a specimen, among some minute insects taken at hazard by a friend.

#### GENUS CXIX.—PTOMAPHAGUS, *Illiger*.

*Palpi*, maxillary with the last joint subulate, conic; *labial* with the last joint obtuse; *antennæ* straight, clavate, not longer than the thorax, with a five-jointed club; *thorax* with the hinder angles acute; *elytra* not striated; *anterior femora* in both sexes similar and short; the intermediate *tarsi* with the first joint rarely dilated.

This and the two following genera are perhaps rather too finely discriminated; but nevertheless, as there are several species of each, and their numbers are daily becoming augmented, it is far better to keep them separated than to reunite them notwithstanding their trifling distinctions, which are perhaps of equal value with those existing amongst several other groups of Coleoptera, especially amongst the Bembidiidæ: the present genus may be known from the following by the absence of striæ on the elytra, and from *Choleva* by the acute posterior angles of the thorax, and shorter and more distinctly thickened antennæ.

Sp. 1. truncatus. *Quadrato-oblongus, supra striis levissimis transversè acuductus; elytris apice subtruncatis.* (Long. corp.  $\frac{3}{4}$ — $1\frac{1}{2}$  lin.)

Ph. truncatus.—*Illiger. Steph. Catal.* 72. No. 777.

Somewhat quadrate-oblong, rather broadest anteriorly, black, and clothed with a dense griseous down, upon the removal of which the surface appears transversely, but finely acuducted: antennæ with the base ferrugineous, the eighth joint three times shorter and more slender than the adjoining ones, the terminal ovate-acute: elytra black or pitchy, sometimes luteous or reddish; the acuducted striæ rather oblique, with a sutural and marginal stria, the apex obliquely truncate: legs black, the tibiæ and tarsi generally blackish-brown or pitchy.

The parallel sided body, transversely acuducted surface and subtruncate elytra distinguish this variable species from its congeners.

The most abundant species of the family; frequenting dry bones,

putrid fungi and vegetable remains: throughout the metropolitan district. “Bottisham.”—*Rev. L. Jenyns*. “Norwich.”—*A. H. Davis, Esq.* “Netley.”—*Rev. F. W. Hope*. “Glanvilles Wootton.”—*J. C. Dale, Esq.*—“Taken by Dr. Leach on the Craig, and by Mr. Jeffreys on Kilvey-hill” (near Swansea).—*L. W. Dillwyn, Esq.*

Sp. 2. *velox*. . *Ovalis, fusco-cinnamomeus, capite nigro, antennis subclavatis, thoracis longitudine, pedibusque dilutioribus.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ch. *velox*. *Spence*.—Pt. *velox*. *Steph. Catal. 72. No. 778.*

Body oval, the sides being a little rounded, above of a rusty-brown or cinnamon colour, beneath darker, with a yellow-grisescient down: head black: antennæ ferrugineous, as long as the thorax, subclavate, the eighth joint scarcely differing either in length or breadth from the rest of the club, the terminal subovate: thorax with the disc sometimes black: elytra rounded at the apex: legs, labrum, and palpi ferrugineous.

The rounded apex of the elytra and body distinguish this from the foregoing species, and the scarcely clavate antennæ with equal eighth joint from the following.

Rare: found in the metropolitan district; Norfolk, Devonshire, and Yorkshire.

Sp. 3. *fumatus*. *Oblongo-ovalis, niger, antennis thoracis longitudine, basi, elytris, pedibusque obscure rufo-ferrugineis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ch. *fumata*. *Spence*.—Pt. *fumatus*. *Steph. Catal. 72. No. 779.*

Oblong-oval, black, clothed with a dense fusco-griseous down: antennæ fuscous; with the two or three first joints rufo-ferrugineous, the eighth shorter than the adjoining: thorax transversely subquadrate: elytra obscure fusco-rufescent, the apex rounded; legs and palpi rufo-ferrugineous.

More frequent than the preceding; but nevertheless somewhat uncommon: found in the neighbourhood of London, in Yorkshire, Norfolk, &c. “In moss from Humby, Lincolnshire.”—*A. H. Davis, Esq.* “In putrid fungi in the woods about Penllergare.”—*L. W. Dillwyn, Esq.*

Sp. 4. *Watsoni*. *Oblongo-ovalis, niger, antennis crassis thorace brevioribus, basi, elytris, pedibusque rufo-brunneis; thorace brevissimo.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ch. *Watsoni*. *Spence*.—Pt. *Watsoni*. *Steph. Catal. 72. No. 780.*

Oblong-oval, black, clothed with a slightly dense griseo-fulvescent down: labrum rusty-brown; palpi ferrugineous; antennæ brown, with their three basal joints reddish-brown, the terminal pale; thorax black, the posterior angles reddish; elytra red-brown, the apex somewhat acute; legs red-brown, anterior, except the coxæ, palest.



The shorter and thicker antennæ and more acute apex to the elytra distinguish this species from *Ph. fumata*.

Also an uncommon species : found near Hull, and in the metropolitan district. “Bottisham.”—*Rev. L. Jenyns*.

Sp. 5. *anisotomoides*. *Ovalis, convexus, nitidus, subpilosus, fusco-piceus, antennis pedibusque pallidè ferrugineis; thorace posticè recto.* (Long. corp.  $\frac{2}{3}$ — $\frac{3}{4}$  lin.)

Ch. *anisotomoides*. *Spence*.—Pt. *anisotomoides*. *Steph. Catal.* 72. No. 781.

Glossy, oval, pitchy-black, clothed with very short grisescent down; labrum and palpi ferruginous; antennæ pale flavescent, as long as the thorax, somewhat capitate-clavate, the eighth joint much less than the adjoining, the terminal large, subglobose and somewhat mucronate; thorax with the hinder margin generally palest, and straight: elytra ovate-convex; legs pale-ferruginous.

Sometimes entirely of a pale testaceous.

The great convexity of the body, and straightly truncate hinder margin of the thorax, distinguish this species from the rest of the genus.

Not very abundant; found near London, Hull, in Devonshire, Norfolk, &c. “Bottisham.”—*Rev. L. Jenyns*. “Moss from Humby.”—*A. H. Davis, Esq.* “Shropshire.”—*C. Darwin, Esq.*

Sp. 6. *Wilkinii*. *Oblongus, fusco-piceus, antennis pedibusque flavo-ferrugineis; thorace posticè recto.* (Long. corp.  $1\frac{1}{4}$  lin.)

Ch. *Wilkinii*. *Spence*.—Pt. *Wilkinii*. *Steph. Catal.* 72. No. 782.

Oblong or sublinear, pitchy-brown, clothed with very short grisescent down: palpi yellow ferruginous; antennæ the length of the thorax and of a yellow-ferruginous; thorax with the hinder margin straight: elytra oblong, the sides nearly straight, the apex rounded: legs yellow-ferruginous.

Resembles Pt. *velox*, but is “distinguished from that by its proportionably much larger and narrower body,” which also well distinguishes it from the preceding (Pt. *anisotomoides*), with which it agrees in the structure of its antennæ and thorax.

Inhabits the county of Norfolk, and has been taken near London, and in other parts; but uncommon. “Salop.”—*C. Darwin, Esq.*

†Sp. 7. *Davisii*. *Oblongo-ovalis, posticè angustiori, subpubescens, fusco-brunneus, thorace magno, convexo, antennis rufò-testaceis, clavâ magnâ.* (Long. corp.  $\frac{3}{4}$  lin.)

Pt. *Davisii mihi*.

Oblong-ovate, rather narrowed behind, slightly pubescent, of a fuscous-brown; the thorax very large, convex, thickly but finely punctured, the hinder margin straight: elytra paler, and clothed with a longer protuberance than the thorax, rather acuminate at the apex, which is somewhat acute and paler than the

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base, near the suture is a single obscure stria; legs pitchy-brown, with the tarsi paler: palpi and antennæ rufo-testaceous, the latter with the basal joint large, and the club very broad and distinct, the terminal joint obtuse.

The great bulk and convexity of the thorax of this species, with its acuminate elytra and broad clava of the antennæ, well distinguish it from its congeners.

I have seen one specimen only of this species, which was found in moss, "from near Humby in Lincolnshire, in December last."—*A. H. Davis, Esq.*

### GENUS CXX.—CATOPS, *Paykul*.

*Palpi*, maxillary with the last joint subulate, conic; *labial* with the last joint obtuse: *antennæ* straight, clavate, not longer than the thorax, the club five-jointed: *thorax* with the hinder angles acute: *elytra* more or less striated; *anterior femora* in the males generally somewhat incrassated towards the apex; the intermediate *tarsi* with the basal joint dilated.

Catops is known from *Ptomaphagus* by the greater width of its body, the more or less evidently striated elytra, and other less visible characters; and from *Choleva* by the abbreviated, more incrassated, antennæ, acute posterior angles of the thorax, &c.

A. Thorax with the hinder margin cut out near the angles.

Sp. 1. fornicatus. *Oblongo-ovalis niger, antennis thorace longioribus, pedibusque ferrugineis.* (Long. corp.  $2\frac{1}{2}$  lin.)

De. fornicatus. *De Geer?*—Ca. fornicatus. *Steph. Catal.* 73. No. 783.

Oblong-oval, black, clothed with a griseo-fulvescent down: palpi ferruginous: antennæ ferruginous, with the apex sometimes brownish, subclavate, rather longer than the thorax, the eighth joint rather shorter and narrower than the adjoining, the terminal more robust than the rest, globose-ovate, with the apex obtusely mucronate: thorax transversely quadrate, the hinder margin a little dilated in the middle, and distinctly cut out near the angles on each side: elytra obsoletely striated, the striæ running from the base to the apex: legs pitchy-ferruginous.

Var.  $\beta$ . *Steph. Catal. l. c.*—Of a pitchy-brown, with the labrum, antennæ, and legs ferruginous.

Var.  $\gamma$ . Yellow-luteous, with the head rather obscure.

Body more oblong than in the rest of the genus.

The most abundant species of the genus near London; and not uncommon in other parts of the country. "Bottisham, several specimens extracted from a decayed cheese."—*Rev. L. Jenyns*. "Carfin, Scotland."—*Rev. F. W. Hope*.

Sp. 2. *sericeus*. *Ovatus, gibbosus-convexus, fusco-piceus, antennis thorace paulo longioribus, pedibusque piceo-ferrugineis.* (Long. corp.  $2\frac{1}{4}$  lin.)

Ca. *sericeus*. *Paykul.*—*Steph. Catal.* 73. No. 784.

Ovate, gibbous-convex, sparingly clothed with variable fulvescent, glaucous, or griseous down: palpi pitchy-ferruginous: antennæ rather longer than the thorax, ferruginous, the base and apex paler: thorax quadrate-transverse, the basal excisions less evident than in the preceding insect: elytra very broad, obsoletely striated, the striæ (beneath a lens) reaching from the base to the apex: legs pitchy-ferruginous.

Sometimes entirely of a yellow-testaceous hue.

Antennæ rather shorter and more slender at the apex than in the preceding species: and the body much broader and more convex than in its congeners generally: the eighth joint of the antennæ not very evidently less than the following.

Found near London and in Devonshire. “Southend.”—*Rev. F. W. Hope*. “Not uncommon (near Swansea).”—*L. W. Dillwyn, Esq.* “Cambridge and Salop.”—*C. Darwin, Esq.*

Sp. 3. *clavicornis*. *Oblongo-ovalis, niger, antennis basi, tibiis tarsisque ferrugineis; capite anticè abbreviato.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Mo. *clavicornis*. *Forster.*—Ca. *clavicornis*. *Steph. Catal.* 73. No. 785.

Oblong-oval, black, clothed with a fulvescent down: head rather short between the antennæ: palpi ferruginous; antennæ ferruginous at the base, the apex fuscous-black; the eighth joint minute: thorax transversely subquadrate: elytra with very obsolete striæ reaching from the base nearly to the apex, the latter rounded: legs rufo-ferruginous, sometimes pitchy-black; the tibiæ and tarsi rufo-ferruginous.

Differs from Ca. *sericeus* by having the apex of the elytra more rounded than in that insect; and from the other species of the genus by the shortness of the fore part of the head.

Not uncommon near London, also found in Devonshire; near Bristol; the New Forest, &c. “Bottisham.”—*Rev. L. Jenyns*. “Carfin, Scotland.”—*Rev. F. W. Hope*.

Sp. 4. *festinans*. *Oblongo-ovatus, niger, antennis basi, labro, elytris, pedibusque rufo-testaceis, thorace anticè angustiore.* (Long. corp. 2 lin.)

Ch. *festinans*. *Spence.*—Ca. *festinans*. *Steph. Catal.* 73. No. 786.

Oblong-ovate, clothed with a rather dense pubescence; labrum and palpi ferruginous: antennæ with the six basal joints ferruginous, the rest fuscous: thorax black-brown, fusco-testaceous at the edges; rather short, the hinder margin with the excisions somewhat obsolete: elytra reddish, or rufo-testaceous, obsoletely striated, the striæ reaching from the base nearly to the apex.

“From the preceding species this differs in colour, in having the thorax shorter

in proportion to its width, narrower before, and in the incisions at the angles more obsolete, and the elytra more densely clothed with pubescence.”—*Spence*.

Not common: I have a pair in my collection captured by myself near London. “Netley.”—*Rev. F. W. Hope*.

Sp. 5. affinis. *Oblongo-ovatus, fuscus, elytris obsoletissimè striatis, striâ suturali profundiore, antennis pedibusque fusco-ferrugineis.* (Long. corp.  $1\frac{3}{4}$  lin.)

Ca. affinis. *Steph. Catal. 73. No. 787.*

Oblong-ovate, fuscous, clothed with fuscous-yellow pubescence; head dusky; antennæ and palpi dusky-ferruginous, with the apex of the former dusky; thorax deep fuscous-brown, with its lateral margins rather testaceous; elytra reddish-fuscous, with a deep stria near the suture, the rest of the surface with extremely obsolete striæ, not reaching to the apex, the latter slightly rounded: legs fusco-ferruginous.

More elongated than either of the foregoing, with the thorax considerably narrower than the coleoptera, the latter most obsoletely striated, and the antennæ are rather stoutly clavate.

One of my specimens I received from the Marshamian cabinet, captured near Bristol; the other was taken by myself near London.

Sp. 6. elongatus. *Elongato-ovatus, piceo-niger, antennis thorace longioribus, pedibusque rufo-ferrugineis, palpis nigris.* (Long. corp.  $2\frac{1}{3}$  lin.)

Ca. elongatus. *Steph. Catal. 73. No. 788.*

Elongate-ovate, depressed: pitchy-black, clothed with a fine grisescent pubescence: labrum and palpi black: antennæ longer than the thorax, dull ferruginous at the base, dusky at the apex, the club rather slender, the eighth joint small, the terminal one short, acute: thorax rather small: elytra narrow, obsoletely striated, the striæ reaching from the base to the apex; the latter rounded: legs rufo-ferruginous; the tibiæ and tarsi palest.

The elongate depressed form of this species, with its slender antennæ, well distinguish it from its congeners.

A single specimen of this insect I obtained from the neighbourhood of Bristol; and I have once captured it in the metropolitan district.

B. Thorax with the hinder margin straight near the angles.

a. *With the sides of the thorax nearly straight at the hinder angle.*

Sp. 7. chrysomeloides. *Oblongo-ovalis, niger, antennis basi, tibiis tarsisque rufo-brunneis; antennis famineis fusiformi-clavatis, crassis, articulo extimo ovato, contiguis longiore.* (Long. corp.  $2\frac{1}{2}$  lin.)

He. chrysomeloides. *Panzer.*—Ca. chrysomeloides. *Steph. Catal. 73. No. 789.*

Oblong-oval, black, clothed with a dense velvety down, of a griseo-fulvescent hue; palpi rufous-brown; antennæ in the female subfusiform, stout, one-third shorter than the thorax, longer and more slender in the male, reddish-brown at the base, the eighth joint much shorter and smaller than the adjoining, the terminal twice as long as the tenth, ovate; thorax subquadrate, with the basal margin in the middle a little sinuated on each side; elytra oblong-ovate, slightly dilated in the middle, most obsoletely striated—the striæ not visible without removing the pubescence; legs black, with the apex of the anterior femora, the tibiæ, and tarsi, reddish-brown.

Found in Norfolk, Yorkshire, Devonshire, and in other parts of the country; not uncommon. “Bottisham.”—*Rev. L. Jenyns*. “Taken on the sand-hills (near Swansea) by Mr. Jeffreys.”—*L. W. Dillwyn, Esq.* “Netley.”—*Rev. F. W. Hope*.

Sp. 8. *Leachii*. *Ovalis, niger, antennis basi, tibiis tarsisque rufo-brunneis; antennis clavatis: articulo extimo brevi, mucronato; capite anticè abbreviato.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ch. *Leachii*. *Spence*.—Ca. *Leachii*. *Steph. Catal.* 73. No. 790.

Very similar to the preceding, differing by having the antennæ more slender, the base rufo-brunneous, the apex somewhat fuscous, the six terminal joints turbinate; the terminal globose-ovate mucronate, subequal to the contiguous one; head less than in the preceding, shorter between the antennæ; elytra shorter than in the foregoing species.

Found in the north of England and near Bristol. “In a common between Crosby and Carlisle.”—*Dr. Leach*.

Sp. 9. *Kirbii*. *Obovatus fuscus, pedibus dilutioribus, antennis basi ferrugineis, articulis ultimis transversis, elytris apicè acutis.* (Long. corp.  $1\frac{7}{8}$  lin.)

Ch. *Kirbii*. *Spence*.—Ca. *Kirbii*. *Steph. Catal.* 73. No. 791.

Obovate, fuscous; clothed with a grisescent down: labrum and palpi ferruginous; antennæ nearly as long as the thorax, with the five basal joints ferruginous, the rest fuscous; thorax quadrate-subtransverse, obscurely sinuated on each side in the middle of the hinder margin; elytra with very obsolete striæ, the apex somewhat acute; legs pale-fuscous.

Var.  $\beta$ . Black, elytra reddish, with the base of the antennæ, the tibiæ, and tarsi, ferruginous.

Similar to the foregoing: differs therefrom in colour, size, in having the thorax more distinctly narrowed behind, the elytra in proportion to the thorax broader, and somewhat more acute at the apex.

Taken in plenty in a chalk-pit at Little Blakenham, in September, 1821. “Netley.”—*Rev. F. W. Hope*.

Sp. 10. *Spencii*. *Obovatus posticè subacuminatus, nigro-fuscus, elytris dilu-*

*tioribus, antennis palpis pedibusque rufo-brunneis, articulo ultimo antennarum conico.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ca. Spencii. *Steph. Catal.* 73. No. 792.

Rather less than the last; obovate, black-brown, with the elytra paler, clothed with a pale hoary fulvescent down; palpi rufo-brunneous; antennæ rather slender, longer than the thorax, with the club not much thickened, the eighth joint very short and narrow, the terminal conic-acute; elytra dilated a little way from the base, and then somewhat suddenly acuminate to the apex, which is a little rounded, and distinctly striated; legs rufo-brunneous.

Shorter and comparatively broader than the preceding, which it most resembles, the thorax more narrowed behind, and the base of the elytra also very narrow, the middle dilated, and the apex acuminate; antennæ more slender.

A single specimen taken by myself near London, some years since.

Sp. 11. *caliginosus*. *Oblongo-ovalis, atro-niger, antennarum basi apiceque, femoribus anticis, tibiis tarsisque rufo-testaceis.* (Long. corp. 2 lin.)

Ca. *caliginosus*. *Steph. Catal.* 73. No. 793.

Oblong-ovate, deep black, clothed with fusco-grisescens down; labrum, palpi, base of the antennæ, and the terminal joint of the latter, with the anterior femora, tibiæ, and tarsi rufo-testaceous; elytra obsoletely striated, the apex rounded; antennæ rather slender, longer than the thorax, the eighth joint not very much slighter, but shorter, than the adjoining.

In form somewhat resembling Ca. *chrysomeloides*, but more elongate, of a deeper black, smaller, the antennæ more attenuated in proportion, and with the eighth joint larger.

Two specimens found near London.

b. *With the sides of the thorax rounded from the base to the apex: the hinder margin without excision.*

Sp. 12. *Marshami*. *Oblongo-ovalis fuscus, antennis, thoracis longitudine, pedibusque flavo-ferrugineis; elytris apicè obtusiusculis.* (Long. corp.  $2\frac{1}{4}$  lin.)

Ch. *Marshami*. *Spence*.—Ca. *Marshami*. *Steph. Catal.* 73. No. 794.

Oblong-oval, fuscous, clothed with a griseous-yellowish pubescence, labrum and palpi yellow-ferruginous, antennæ the same, darker in the middle, subclavate, as long as or rather longer than the thorax, the eighth joint considerably less than the adjoining, the terminal ovate; thorax transversely-subquadrate; elytra very obsoletely striated towards the apex, the latter somewhat obtuse; legs yellow-ferruginous.

Var.  $\beta$ . Pitchy-black, with the antennæ and legs ferruginous.

Longer, with the thorax less transverse, than the following species, which is the only one of the genus with which it can be confounded, if due attention be paid to the form of the thorax, which in this genus is essential.

I possess a pair of this insect: one from the Marshamian cabinet

—the specimen described by Mr. Spence; the other taken near London:

Sp. 13. *dissimulator*. *Ovalis, niger, antennis, thoracis longitudine, basi apiceque tibiis tarsisque rufo-ferrugineis*. (Long. corp. 2 lin.)

Ch. *dissimulator*. *Spence*.—Ca. *dissimulator*. *Steph. Catal.* 73: No. 795.

Oblong-oval, black, clothed with a dense fulvescent-griseous down; palpi rufo-ferruginous: antennæ as long as the thorax, fuscous, with the two basal joints and the terminal ferruginous: thorax subquadrate-transverse; elytra not striated, a single stria near the suture excepted: anterior legs rufo-ferruginous; posterior black, with the tibiæ and tarsi rufo-ferruginous.

"This insect," says Mr. Spence, from whose valuable monograph of this and the kindred genera I have extracted the leading characters of the species therein described, "affords a striking example of the necessity of attending, in these obscure genera, to minute characters, such as those upon which the families (sections) are here separated. In colour and general appearance it so exactly resembles Ca. *clavicornis*, that an entomologist not versed in the genus would decidedly pronounce them the same." The form of the thorax, and other characters, render the distinction very evident.

One of my specimens was captured near London, the other I obtained from Bristol.

## GENUS CXXI.—CHOLEVA, Latreille

*Palpi*, maxillary with the last joint subulate, conic; labial with the last joint obtuse: antennæ straight subfiliform, longer than the thorax, the club five-jointed, the joints somewhat elongated: thorax with the hinder angles obtuse: elytra oblong, striated: legs rather long, posterior as long as the body; anterior femora of similar form in both sexes; posterior trochanters of the male with a curved tooth on the lower margin, simple in the female; the intermediate tarsi with the basal joint filiform in both sexes; the anterior with the three basal joints dilated in the male.

Choleva is distinguished externally from Catops by its more elongate form, and by the length and slenderness of its antennæ and legs, the obtuse angles of the thorax, and in other less evident characters.

Sp. 1. *angustata*. *Angustato-oblonga, thorace posticè angustiore, medio subfoveolato*. (Long. corp.  $2\frac{1}{2}$  lin.)

Cistela *angustata*. *Fabricius*.—*Steph. Catal.* 74. No. 796.—Ch. *oblonga*. *Sa-mouelle*, pl. 4. f. 9.

Narrow-oblong, with an obscure fulvescent pubescence: head black, shining,

smooth: labrum and palpi pale-ferruginous: antennæ ferruginous, the joints of nearly equal length, the second and eighth shortest: thorax piceous, with the sides and posterior angles paler, sometimes black, or pitchy-black; quadrate-orbicular, the base and apex of nearly equal width; the middle broader: elytra generally obscure-reddish, or black, or pitchy-black, or piceous, oblong, the apex obtusely rounded, each with seven obsolete striæ: legs ferruginous: abdomen black, with the terminal segments rather pale at the apex.

Very variable in colour; when recently emerged from the pupa, it is entirely of a pale-testaceous or yellow.

Extremely common throughout the metropolitan district, and in other parts adjacent thereto. "Bottisham, very common."—*Rev. L. Jenyns*. "Carfin, Scotland."—*Rev. F. W. Hope*. "Epping."—*Mr. Doubleday*. "Under stones on Crwmllyn Burrows and elsewhere."—*L. W. Dillwyn, Esq.* "Carlisle."—*T. C. Heysham, Esq.* "Leamington."—*Mr. Westwood*. "Netley."—*Rev. F. W. Hope*. "North Wales."—*C. Darwin, Esq.*

Sp. 2. *agilis*. *Oblongo-ovalis, nigra, supra piceo-brunnea, antennis pedibusque ferrugineis; thorace posticè latiore.* (Long. corp.  $2\frac{1}{4}$  lin.)

Pt. *agilis*. *Illiger*.—Ch. *agilis*. *Steph. Catal.* 74. No. 797.

Body shorter and broader than in the preceding; clothed with a denser griseo-fulvescent pubescence: head pitchy-black, smooth: labrum, mandibles, and palpi yellow: antennæ ferruginous, with the apex darker: thorax pitchy-brown, with the disc darker, subconvex, transverse-quadrate, the base rather broader than the apex, the hinder margin straight: elytra ovate-oblong, pitchy-brown, with seven very obsolete striæ: body beneath pitchy-black; legs ferruginous.

Like the preceding, this species varies considerably in colour, and the immature specimens are of a testaceous-yellow.

Less common than the last, but occasionally found not only throughout the metropolitan district, but in other parts. "Moss from Humby, Dec. 1829."—*A. H. Davis, Esq.* "Netley."—*Rev. F. W. Hope*. "North Wales."—*C. Darwin, Esq.*

Sp. 3. *gausapata*. *Oblongo-ovalis, piceo-nigra pube densiori vestito, antennis pedibusque piceo-ferrugineis, thorace posticè latiore.* (Long. corp.  $2\frac{1}{4}$  lin.)

Cl. *gausapata*. *Spence MSS.*?—Cl. *gomphosata*. *Steph. Catal.* 74. No. 798.

Size of the last; oblong-oval, above deep pitchy-black, clothed with a dense changeable fulvescent pubescence: labrum and palpi pitchy-fulvous; thorax with its margins slightly testaceous, the disc pitchy-black; slightly convex,



transverse-quadrate, the hinder margin rather broader than the apex, the sides gradually rounded: elytra oblong-ovate, with very obsolete striæ: body beneath pitchy-black; legs and antennæ ferruginous.

Whether this be the true *Ch. gausapata*, Spence's MSS. (inadvertently called *gomphosata* in my Catalogue), I am unable to determine—the insect above described is clearly distinct from either of its congeners, and may be known by the greater density of the pubescence with which it is clothed, and its darker hue.

Found near London; in Devonshire, and, I believe, in Yorkshire and Norfolk.

### FAMILY XVIII.—SILPHIDÆ, *Leach.*

*Antennæ* about as long as the thorax, gradually thickening towards their extremities, or terminated by a perfoliate club, the latter generally 4 or 5-jointed, rarely 3-jointed. *Palpi* filiform, the *maxillary* rather longer than the labial: the terminal joint rather slender, cylindric: *mandibles* with their apex entire: *body* ovate, depressed: *head* inflected, much narrower than the body, contracted posteriorly, and forming a neck; *thorax* large, peltate, more or less semicircular or orbicular: *elytra* covering the greater portion of the abdomen, or truncated, with the outer margin generally channelled: *abdomen* with its apex rather acute, especially in the female: *legs* not much elongated: *tarsi* five-jointed, the anterior more or less dilated in the males.

The Silphidæ, which form the typical group of the Necrophaga, delight in prowling amongst carrion, carcasses, or any putrefying animal matter, upon which they subsist (whence they contract a most disagreeable fœtid odour), but some few attack living caterpillars or terrestrial mollusca; they are consequently of great utility in the economy of nature, by thus removing those animal nuisances which would otherwise tend to infect the atmosphere and render it unwholesome.

The larvæ inhabit the same materials, and are frequently observed in company with the perfect insect: the body is elongate, very much depressed, generally black, composed of twelve segments, terminating on the sides in a sharp angle; the anterior segment is largest: the head is small, furnished with two strong jaws; the antennæ short, filiform, triarticulate: the legs six in number, short, three-jointed, the terminal one with a hook at its tip; the last segment of the body has two conical appendages: they are very active, and change to pupa beneath the ground.

The genera which are reputed to inhabit Britain may be detected by the following concise characters;

Elytra	truncata.	An- tennæ.	{	capitulo subgloboso, 4-articulato :	122. NECROPHORUS.
				gradatim extrorsum crassiores :	123. NECRODES.
	haud truncata.	Palpi ar- ticulo ul- timo	{	graciliore. Antennæ { abruptè clavatæ :	124. OICEOPTOMA.
				gradatim clava- vatæ, capitulo { 4-articulato :	125. SILPHA.
				3-articulato :	126. PHOSPHUGA.
				crassiore. Antennarum capitulo { 5-articulato :	127. AGYRTES.
				3-articulato :	128. PELTIS.

### GENUS CXXII.—NECROPHORUS, *Fabricius*.

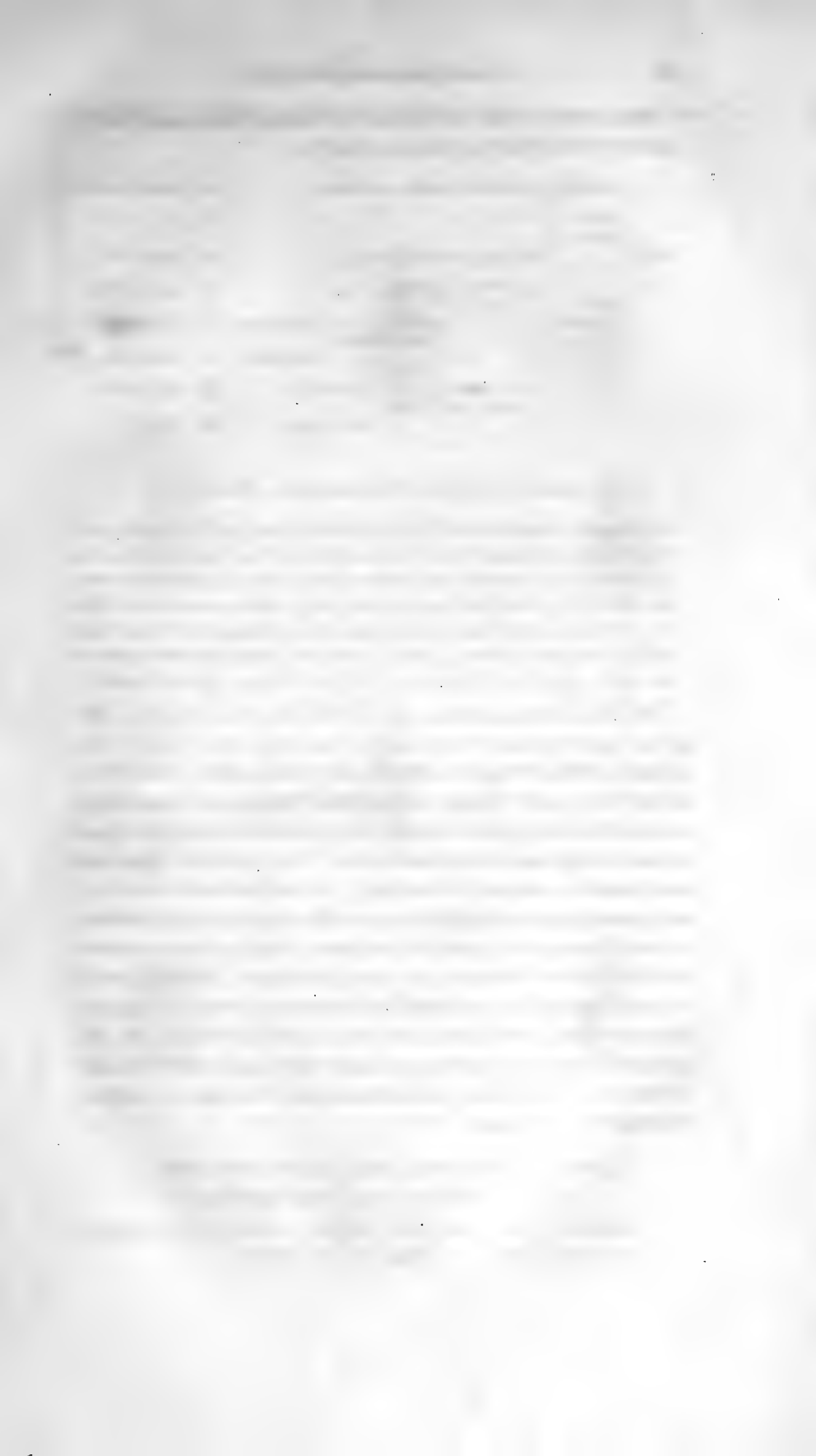
*Antennæ* rather longer than the head, slender at the base, and terminating suddenly in a large ovate perfoliate club, composed of four coarctate joints, the last of which is acuminate: *head* with a distinct neck: *thorax* suborbiculate, rounded behind, transversely truncate anteriorly: *elytra* truncated in a slight line, with a marginal channel, not carinated; *body* oblong, much longer than broad: *tibiæ* short, robust; *posterior trochanters* sometimes with a spine at the apex; *anterior tarsi* dilated and furnished with long cilia in the males.

This conspicuous genus may be readily known by the large subglobose quadriarticulate clava of the antennæ, combined with the truncate elytra, irregular suborbicular thorax, short robust legs, oblong body, and distinct neck:—their wings are exceedingly long, and during flight the insects carry their elytra erect, the upper surfaces being opposed to each other. The species frequent the same haunts as the rest of the family, but, unlike their allies, they bury the animals upon which they, or rather their progeny, subsist—whence the names of several of the species—three or four specimens sufficing for the interment of a small quadruped, bird, &c., which they will perform in an incredible short space of time, by digging away the earth around and under the animal till it falls into the prepared hollow, and covering the body with the displaced mould:—some of the species are found also in fungi: they are very subject to be infested with acari.

A. With the posterior tibiæ straight; the trochanters simple.

a. With the thorax very much dilated anteriorly.

Sp. 1. *germanicus*. *Niger, clypeo medio membranaceo flavo, elytrorum margine rufo, antennarum clavâ atrâ.* (Long. corp. 13—16 lin.)





*Si. germanica*. Linné.—*Ne. germanicus*. Curtis, ii. pl. 71.—*Steph. Catal.* 74. No. 799.

Black, with a large triangular membranaceous testaceous-yellow spot on the forehead, and the outer margin of the elytra broadly rufo-ferruginous: the clava of the antennæ black.

Towards the apex of the elytra is sometimes a rufous spot; probably immature.

Known from *Ne. Humator* by the black club of the antennæ, the rufous margin to the elytra, the anteriorly dilated thorax, and by its superior size.

Very rare in Britain; but rather widely dispersed: I possess a specimen from Moushold Heath, near Norwich. "Lord Abingdon's woods, near Oxford."—*Rev. F. W. Hope*. "On the banks of the Thames, above Windsor."—*Dr. Leach*.

Sp. 2. *Sepultor*. PLATE xvi. f. 1. *Niger, antennarum capitulo elytrorumque fuscâ duplici aurantiacis, posteriore interruptâ, thoracis limbo latâ flavo-aureâ tectâ*. (Long. corp. 7—10½ lin.)

*Ne. Sepultor*. Gyllenhal.—*Ne. anglicus*. *Steph. Catal.* 74. No. 800.

Black, head with a triangular luteous spot on the elytra: antennæ with the club orange: thorax densely clothed with a rich golden-yellow down, on its margin, especially anteriorly: elytra with two orange fasciæ, varying considerably in different individuals; the anterior one generally broad, and continuous; the posterior narrow, interrupted at the suture, and very frequently divided into two very unequal parts by the black ground of the elytra, which leaves a small spot between the outer portion and the suture.

The width of the orange fasciæ on the elytra varies considerably, as do also their form and integrity.

*Ne. Vespillo* is the only other species of the genus which has the anterior margin of the thorax pubescent, but the straight posterior tibiæ of *Ne. Sepultor* at once distinguish it from the aforementioned species, in which the elytra also are pubescent.

Rare; found in Battersea-fields and on Hampstead-heath, and other parts of the metropolitan district. "Twice taken at Ealing; not uncommon at Netley."—*Rev. F. W. Hope*. "In carrion, not uncommon (near Swansea)."—*L. W. Dillwyn, Esq.*

b. *With the thorax not much dilated anteriorly.*

Sp. 3. *Humator*. *Niger, immaculatus, antennarum capitulo aurantiaco*. (Long. corp. 9—14. lin.)

*Si. Humator*. Olivier.—*Don. xv. pl. 537. f. 1.*—*Ne. Humator*. *Steph. Catal.* 74. No. 801.

Entirely of a deep glossy-black, with the three terminal joints of the antennæ of an orange or testaceous-yellow, and the deflexed margin of the elytra

sometimes of a dusky or obscure brown; the cilia on the tarsi are also of an orange hue.

Var.  $\beta$ . *Ne. bimaculatus*. *Entomological Transactions*, i. 82. pl. 2. fig. sup.—Black, with a patch on the forehead, the outer margin of the elytra and two spots towards the apex ferruginous.

Very variable both in size and colour; in some examples the elytra are entirely brown, arising doubtless from immaturity.

The most abundant species of the genus in Britain, occurring in plenty throughout the metropolitan district. “Bottisham, common in the spring; appearing by the end of March.”—*Rev. L. Jenyns*. “Netley, Barmouth, &c.”—*Rev. F. W. Hope*. “Epping.”—*Mr. Doubleday*. “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Common (near Swansea).”—*L. W. Dillwyn, Esq.* “Carlisle.”—*T. C. Heysham, Esq.*

Sp. 4. *vestigator*. *Niger, antennarum capitulo elytrorumque fasciâ duplici aurantiacis, posteriore subinterruptâ, thorace supra nudo.* (Long. corp. 7 lin. —1 unc.)

*Ne. vestigator*. *Herschel*.—*Steph. Catal.* 75. No. 802.

Black; the antennæ with the three last joints orange; the elytra with two transverse fulvous-orange bands, the anterior of which is continuous and in general nearly of an uniform width, or slightly narrowed towards the suture, and its edges sinuate-dentate; the posterior one is abbreviated and irregularly sinuated towards the suture, and is connected to the anterior one by the luteous reflexed margin of the elytra; the tarsal cilia are also orange or flavescens; thorax naked.

Also very variable, with regard to size and the width of the orange fasciæ on the elytra, but of the latter the anterior one is generally much wider than the posterior.

The naked thorax and straight hinder tibiæ distinguish this insect from *Ne. Vespillo*, and the former character from *Ne. Sepultor*; from the following the continuous anterior fascia on the elytra and their greater width distinguish it.

Less common than *Ne. Vespillo*; found throughout the metropolitan district, in Norfolk, &c. “Bottisham and elsewhere, common; chiefly in the carcasses of the larger animals about midsummer.”—*Rev. L. Jenyns*. “Very abundant at Netley.”—*Rev. F. W. Hope*.—“Milford Haven and Dartmoor.”—*Dr. Leach*. “Common (near Swansea).”—*L. W. Dillwyn, Esq.* “Carlisle.”—*T. C. Heysham, Esq.*

Sp. 5. *interruptus*. PLATE XVI. f. 2. *Niger, antennarum capitulo elytrorumque fasciis duabus interruptis aurantiacis, thorace supra nudo.* (Long. corp. 8—9½ lin.)

*Ne. interruptus*, *mihi*.—*Ne. Sepultor*. *De Jean?*—*Steph. Catal.* 75. No. 803.\*  
*Ne. Vespillo*. *Samouelle*, *pl.* 2. *f.* 6.

Glossy-black; antennæ with the terminal joints orange; the elytra with two irregular transverse bright fulvous-orange bands, interrupted at the suture, and united exteriorly by the luteo-fulvous margin of the elytra; thorax naked.

The interrupted and clear fulvous-orange fasciæ on the elytra, with the usually smaller size of the insect, at once distinguish this species from the foregoing, with which it has hitherto been confounded. My friend Professor Henslow first called my attention to the point of its distinction from *Ne. vestigator*; and from an attentive examination of a numerous series of examples, I am satisfied that it is not a variety of that insect, from which, exclusively of the above characters, it also differs in having the interrupted fasciæ on the elytra either of a nearly similar width, or the posterior one the broadest, whereas the contrary is the case with the preceding species.

Much less abundant than the last: found in various places within the metropolitan district; in Norfolk, the New Forest, &c.  
 “Found with the preceding, but occurs much less frequently.”  
 —*Rev. L. Jenyns and C. Darwin, Esq.* “Once found at Ealing.”  
 —*Rev. F. W. Hope.*

Sp. 6. *Mortuorum*. *Niger*, *elytris fasciâ latâ crenulatâ, maculâque reniformi apicis aurantiacis, antennarum clavâ nigrâ*. (Long. corp. 5—9 lin.)

*Ne. Mortuorum*. *Fabricius*.—*Steph. Catal.* 75. No. 804.—*Si. Mortuorum*. *Don.* xv. *pl.* 537. *f.* 2.

Black; the elytra with a broad crenulated orange fascia at the base, and a reniform or lunate spot at the apex, not connected to the anterior, as in the two last-mentioned species, by a luteous margin to the elytra, the base and middle of the reflexed margin alone being of that colour: antennæ with the capitulum black.

The black club to the antenna, and the simple spot towards the apex of the elytra, are the most conspicuous marks of distinction between this and its fasciated congeners.

Not so abundant as *Ne. Vespillo*, but found throughout the metropolitan district. “Not yet observed by me in Cambridge-

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\* During the progress of the early portion of my Systematic Catalogue through the press, I obtained a hasty view of Gyllenhal's fourth volume, previously to the receipt of my own copy, which did not arrive till nearly half the Catalogue was printed:—the references thereto are consequently less definite than they might otherwise have been; and in this, as in one or two other instances hereafter to be pointed out, appear to be erroneous.

shire.”—*Rev. L. Jenyns*. “Epping.”—*Mr. Doubleday*. “Not very common (near Swansea), sometimes, though rarely, in fungi.”—*L. W. Dillwyn, Esq.* “Carlisle.”—*T. C. Heysham, Esq.*

B. With the posterior tibiæ curved; the trochanters with an acute spine.

Sp. 7. *Vespillo*. *Niger, antennarum capitulo elytrorumque fasciâ duplici aurantiacis, thorace anticè supra flavo-aureo pubescente.* (Long. corp. 6—12 lin.)

Si. *Vespillo*. *Linné.—Don. i. pl. 23.?*—*Ne. Vespillo. Steph. Catal. 75. No. 805.*

Black: head with an obscure triangular luteous spot on the clypeus; thorax with its anterior margin above clothed with a golden-yellow pubescence: elytra pubescent, with two broad continuous sinuated orange fasciæ, the anterior usually broadest, connected by the orange margin of the elytra; posterior tibiæ rather long and much incurved; the posterior trochanters with an elongate, subacuminated spine at the apex; antennæ with the tip orange.

The incurved posterior tibiæ and spinose hinder trochanters at once point out this species from its congeners:—it varies much both in size and colour, and in some individuals the posterior fascia on the elytra is interrupted at the suture, and the elytra are glabrous:—probably a distinct species.

Common in fields, pathways, lanes, &c. throughout the metropolitan district; also at Dover, Brighton, Shoreham; in Norfolk, Devonshire, &c. “Bottisham, common in the spring; occurring mostly in dead birds and the smaller quadrupeds, which it buries.”—*Rev. L. Jenyns*. “Epping.”—*Mr. Doubleday*. “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Not uncommon (near Swansea).”—*L. W. Dillwyn, Esq.*

### GENUS CXXIII.—NECRODES, *Wilkin*.

*Antennæ* distinctly longer than the head, rather slender, terminating gradually in an elongate perfoliate club, composed of three joints, the terminal one obtuse: *head* oblong, with a distinct neck: *eyes* large, prominent: *thorax* orbicular, with a narrow border: *elytra* obliquely truncated at the apex, tricarinated: *body* elongate-oval, scarcely longer than the elytra: *legs* elongate: *tibiæ* channelled, slightly spinose: *posterior femora* of the males more or less thickened and clavate, sometimes denticulated: *anterior tarsi* in the male more or less dilated.

*Necrodes* differs from *Necrophorus*, which it resembles by having the elytra truncate, in the form of the clava of the antennæ, which is elongate, not subglobose; the elytra are carinated, and the legs elongate; the head is rather small; eyes large; thorax orbicular; and in the males the posterior femora are frequently of great bulk



and thickness: by which characters and its elongate body this genus may be known from the rest of the family.

Sp. 1. littoralis. *Nigra, antennis apicè testaceis.* (Long. corp. 7—12 $\frac{1}{4}$  lin.)

Si. littoralis. *Linné.*—*Ne. littoralis.* *Steph. Catal.* 75. No. 806.

Oblong, depressed, black: eyes glaucous: antennæ black, with the three terminal joints testaceous-yellow; thorax large, slightly convex: elytra elongate, a little dilated in the middle, finely and thickly punctulate, with three smooth, elevated, lines, reaching to the apex, and a short one at the base between the two exterior ones, and towards the apex of the latter a transverse elevated tubercle: body deep glossy-black beneath.

In some males the posterior femora are remarkably thickened and denticulated beneath; while others have them very simple and unarmed; the posterior tibiæ are also more or less arcuated; and the anterior tarsi dilated: in the females the legs are however always simple.

The size of this species varies greatly, some examples (given as distinct by Dr. Leach in the Edinburgh Encyclopædia, under the name *Ne. Curtisii*) being only seven lines in length, while others exceed an inch. Again the elytra are sometimes of a livid brown or dull rufescent, but, in other points, similar to the above.

Not uncommon on the banks of the Thames near Gravesend; and in Battersea-fields; also on the shores of the Severn. “Frequent at Bottisham, about midsummer; found chiefly in the larger carcasses.”—*Rev. L. Jenyns.* “Netley.”—*Rev. F. W. Hope.* “Parley-heath.”—*J. C. Dale, Esq.* “Var.  $\beta$ . Loch Lomond.”—*Dr. Leach.* “In carrion common (near Swansea), and sometimes under sea-weeds about high-water mark.”—*L. W. Dillwyn, Esq.* “Carlisle.”—*T. C. Heysham, Esq.* “Sidmouth.”—*T. Marshall, Esq.* “Wandsworth Common.”—*Mr. G. Waterhouse.*

#### GENUS CXXIV.—OICEOPTOMA, *Leach.*

*Antennæ* nearly as long as the thorax, rather slender at the base, and terminating abruptly in a quadriarticulate club, the basal joint of which is small, and the terminal large, obconic: *head* small, inflected: *eyes* moderate: *thorax* nearly semicircular, transverse, emarginate anteriorly: *elytra* entire (of the females sometimes emarginated at the apex), carinated, with a deep marginal canal: *body* oval, depressed: *legs* rather short, slender: the *anterior tarsi* of the males slightly dilated.

Oiceoptoma may be known from the other genera of this family by the abrupt quadriarticulate club of the antennæ, united to the depressed oval body, covered to the apex with the elytra, which are

carinated, somewhat rugose and entire, or with the tip sometimes a little notched, but not abbreviated as in the two preceding genera. The species are very prone to monstrosity in the form of the thorax, which is sometimes deeply cut out on its lateral and posterior margins.

A. Both sexes with the elytra entire at the apex.

Sp. 2. *thoracica*. *Nigra sericeo-nitens, thorace rubro fulvo-villoso, elytris lineis tribus elevatis flexuosis.* (Long. corp.  $6\frac{1}{2}$ — $7\frac{1}{2}$  lin.)

Sc. *thoracica*. Linné.—Don. ii. pl. 63. f. 1.—Oi. *thoracica*. Steph. Catal. 76. No. 808.

Black: head punctured, clothed with pale sericeous down: thorax rufo-testaceous, with a silken golden-fulvous pubescence, finely punctured: elytra ovate, black, of a satiny texture, finely punctured, with three slightly flexuous clavated lines, of which the two interior are slenderest and united at the apex, the exterior one more short, considerably abbreviated, and terminates in a transverse tubercle.

Var.  $\beta$ . Elytra with a rich fulvo-testaceous pubescence.

† Var.  $\gamma$ . Thorax with its lateral margins deeply excised.

Far from uncommon near London, and throughout the metropolitan district. “Knockholt and Bexley, Kent.”—Mr. Ingpen. “Bottisham, not uncommon in the spring.”—Rev. L. Jenyns. “Lord Abingdon’s wood, in profusion.”—Rev. F. W. Hope. “Epping.”—Mr. Doubleday. “Enborne and Bristol.”—J. C. Dale, Esq. “Abounds about Penllergare or Phallus foetidus, and sometimes in dead birds.”—L. W. Dillwyn, Esq.

Sp. 3. *rugosa*. *Nigra pubescens, thorace tuberculato, elytris trilineatis, transversim rugosis.* (Long. corp.  $3\frac{1}{2}$ —5 lin.)

Si. *rugosa*. Linné.—Oi. *rugosa*. Steph. Catal. 76. No. 809.

Somewhat oblong-oval: black: head clothed with a dense griseous pubescence; antennæ black, with the capitulum obscure-fuscous: thorax truncate anteriorly, sinuated posteriorly, the surface clothed with a very short ashy pu-

† Sp. 1. *marginalis*. *Atra, thoracis margine pallido, elytris fuscis.*

Si. *marginalis*. Fabricius.—Curtis (!)—Oi. *marginalis*. Steph. Catal. 75. No. 807. note.

Head black, rugose: thorax black, with its margin sinuated and pale; elytra fuscous, with three elevated lines: legs black.

An injured specimen of this insect was obtained by Mr. Wilkin from the late Mr. Tuther’s cabinet; but as it is unquestionably a native of North America, it is not likely to be indigenous to Britain.—See Note, vol. ii. p. 68.

bescence, with numerous elevated naked tubercles: elytra with three elevated flexuous longitudinal lines, with transverse slightly glossy wrinkles and tubercles between each, frequently united to the carinæ; towards the apex of the elytra on the extreme carina is a larger transverse elevation, or tubercle; the apex of the elytra is obsoletely sinuated: body beneath black, with cinereous pubescence, the apex rufescent.

Extremely variable in size; and slightly so in form, some examples being more elongate than others.

Abundant throughout the metropolitan district, also found near Dover, Hastings, Brighton, Shoreham, the Isle of Wight, &c. "Very common in Cambs."—*Rev. L. Jenyns*. "Riverhead, Kent." *Mr. Inghen*. "Netley, Southend, &c."—*Rev. F. W. Hope*. "Epping."—*Mr. Doubleday*. "Abundant on the banks of the Thames, Plaistow marshes, and near Walthamstow."—*A. Cooper, Esq.* "Parley."—*J. C. Dale, Esq.* "Very common in carrion, particularly in dead rooks in the rookery at Penllergare."—*L. W. Dillwyn, Esq.* "Carlisle."—*T. C. Heysham, Esq.* "Scarborough."—*T. Bean, Esq.*

#### B. Elytra of the females emarginate at the apex.

Sp. 4. *sinuata*. *Nigra obscura, capite thoraceque pubescens, hoc subemarginato tuberculato; elytris glabris, trilineatis.* (Long. corp. 4—5 lin.)

Si. *sinuata*. *Fabricius*.—*Don*. xv. pl. 539.—*Oi. sinuata*. *Steph. Catal.* 76. No. 810.

Elongate-ovate; obscure black; head clothed with rufo-cinereous pubescence: thorax nearly as in the preceding, but the angles more rounded and the hinder margin less sinuated: the disc clothed with cinereous down, with numerous glabrous elevated spots; elytra glabrous, oblong-ovate, obscure black, finely punctured, with three acute elevated lines; the interior straight, the exterior arcuated beyond the ordinary tubercle towards the apex of the elytra: body beneath pubescent, with the apex piceous; legs black; tarsi piceous.

In the male the elytra are subtruncate; and in the females they are produced at the apex of the suture into an elongate rounded lobe, exterior to which is a deep sinuated emargination.

†Var. β. With the lateral margins of the thorax deeply excised at the base, leaving an acute process, pointing backwards; the hinder margin also excised near the hinder angles, and sinuated in the middle.

Very abundant near London and in other parts. "Bottisham and elsewhere; but is much less plentiful than *Oi. rugosa*."—*Rev. L. Jenyns*. "Riverhead."—*Mr. Inghen*. "Netley, Southend, &c."—*Rev. F. W. Hope*. "Epping."—*Mr. Doubleday*. "East

Ham and Plaistow marshes, common.”—*A. Cooper, Esq.* “In putrid birds (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 5. dispar. *Fusca obscura, capite thoraceque pubescens, hoc subemarginato tuberculato, elytris trilineatis, pilosis.* (Long. corp.  $4\frac{1}{3}$  lin.)

Si. dispar. *Illiger.*—Oi. dispar. *Steph. Catal.* 76. No. 811.

Rather less than the last; obscure fuscous: head and thorax as in the preceding, but more densely pubescent; elytra of the same form, but throughout clothed with depressed cinereous pubescence, with three elevated lines, of which the exterior are scarcely arcuated; and the ordinary tubercle more elevated and larger than in *Oi. sinuata*.

The male has the apex of the elytra obtusely truncate: the female has it slightly emarginate.

The pubescent elytra (exclusively of other characters) at once discriminate this species from the preceding.

Gyllenhal refers the *Silpha opaca* of Marsham to this species; in which particular he has lately been followed by Mr. Dillwyn, but incorrectly; the Marshamian insect, which is in my possession, being evidently the female of the preceding species.

Rare: four or five specimens have been captured, I believe, in Norfolk.

#### GENUS CXXV.—*SILPHA Auctorum.*

*Antennæ* as long as the thorax, gradually increasing from the base to the apex, forming a quadriarticulate club, composed of nearly equal joints, the terminal one being rather the largest, and conic obtuse: *head* small, inflexed: *eyes* rather prominent: *thorax* semicircular, generally truncate anteriorly; *elytra* entire, generally carinated, with a deep marginal canal: *body* oval, slightly convex: *legs* moderate, rather short; *anterior tarsi* dilated in the males.

The gradually thickened antennæ with a quadriarticulate capitulum of nearly equal joints, with the slightly convex body, generally divested of pubescence above, usually truncate anterior margin of the thorax, and less rugose surface, are the principal external marks of distinction between this and the preceding genus; and from *Phosphuga* it is sufficiently distinguished by the quadriarticulate clava of the antennæ.

##### A. With the thorax emarginated anteriorly.

Sp. 1. quadripunctata. *Ovata, nigra glabra, thoracis limbo elytrisq. pallidis, puncto baseos medioque nigris.* (Long. corp. 6—7 lin.)

Si. 4-punctata. *Linné.*—*Don.* ii. pl. 86. f. 2. *Steph. Catal.* 76. No. 812.

Black; head thickly punctured: thorax with the sides rather flattened, pale testaceous, the disc somewhat convex, foveolated behind, glossy black, with a slender testaceous margin anteriorly, and a broader one posteriorly: scutellum black: elytra pale shining testaceous, thickly punctated; the margin rather flattened, the disc slightly convex, with three somewhat elevated lines, and each with two large glossy black spots, the anterior at the base of the elytra and ovate, the posterior towards the apex and orbicular.

Found in the woods about London, especially at Coombe-wood, frequenting the oaks, upon which it prowls about in search of the larvæ of Lepidopterous insects, upon which it preys. "Bagley-wood, Oxford."—*Rev. F. W. Hope*, and *Rev. W. T. Bree*. "Epping."—*Mr. Doubleday*. "Enborne."—*J. C. Dale, Esq.* "Rare (near Swansea)."—*L. W. Dillwyn, Esq.*

B. With the thorax entire anteriorly.

a. Elytra with elevated lines (usually three).

Sp. 2. *obscura*. *Nigra obscura, thorace anticè truncato, elytris profundius punctatis, lineis tribus elevatis obsoletis.* (Long. corp. 6—8 lin.)

Si. *obscura*. *Linné*.—*Don*. ii. pl. 63. f. 4. *Steph. Catal.* 76. No. 813.

Dull black; head thickly punctured, with an obsolete transverse carina between the eyes: thorax slightly convex, truncate anteriorly, closely and finely punctured: elytra oblong-ovate, a little convex, sparingly, but deeply punctured, with three obscure very obsolete elevated abbreviated lines, the central of which is longest: body thickly punctured beneath.

Common in the vicinity of London, especially in the fields near Hackney, Walthamstow, &c.: also near Erith, Dartford, Ripley, &c. "Common in Cambs."—*Rev. L. Jenyns*. "Southend, Aldborough, &c."—*Rev. F. W. Hope*. "Parley."—*J. C. Dale, Esq.* "Frequent in the sand hills (near Swansea), and under dry rubbish near the sea-side."—*L. W. Dillwyn, Esq.*

Sp. 3. *tristis*. *Nigra subnitida, thorace anticè truncato, elytris subtilissimè punctulatis, lineis tribus elevatis nitidis.* (Long. corp.  $5\frac{1}{2}$ —8 lin.)

Si. *tristis*. *Illiger*.—*Steph. Catal.* 76. No. 814.

Oblong-ovate; deep, somewhat glossy black: thorax slightly convex, truncate anteriorly, obsoletely foveolated, with a rather distinct lunule on each side, the disc rather sparingly punctured; the punctures not very deep; elytra rather deeply punctured, with three elevated, glabrous, shining lines, reaching nearly to the apex, where they are slightly flexuous, and towards the extremity of the outer one is a conspicuous, but not very large, tubercle; body slightly glossy beneath, punctured.

Rarely, if ever, found near London: but far from uncommon

in several places near the coast, especially towards the west of England, and in Wales. "Barmouth, in July last."—*Rev. F. W. Hope*. "Parley."—*J. C. Dale, Esq.* "On the sand hills (near Swansea) common; and in July is sometimes seen lying dead in great numbers."—*L. W. Dillwyn, Esq.* "Carlisle."—*T. C. Heysham, Esq.*

† Sp. 4. *Griesbachiana*. *Nigra subnitida, punctata, elytris creberrimè punctatis lineis tribus elevatis nitidis, exteriores abbreviatæ.* (Long. corp. 8 lin.)

Si. *Griesbachiana*. *Steph. Catal.* 76. No. 815.

Slightly glossy black, head and thorax finely and thickly punctured; elytra coarsely punctured with three elevated glossy carinæ, the sutural and marginal ones abbreviated, the central one reaching to the apex and curved inwardly. Larger than Si. *tristis*; from which it chiefly differs by the abbreviation of the exterior elevated lines on the elytra, and the different position of the central one at the apex: it may be the *Silpha granulata* of Olivier.

"Winchester."—*Mr. A. Griesbach*. The only specimen I have yet seen: it is in the collection at the British Museum.

Sp. 5. *nigrita*. *Atra subnitida, thorace anticè truncato, elytris lineis tribus obsoletis abbreviatis, interstitiis punctulato-subrugosis.* (Long. corp. 6—6½ lin.)

Si. *nigrita*. *Creutzer*.—*Steph. Catal.* 76. No. 816.

Deep, rather glossy black; thorax truncate anteriorly, very finely punctate; with a distinct dorsal channel, and two lunular impressions; elytra very slightly convex, with three very obsolete, abbreviated, lines, the interstices irregularly but thickly punctate, the punctures more or less confluent, and forming a slight wrinkled appearance; body deep glossy black, very finely punctured.

Var.  $\beta$ . With the elytra of a dull ferruginous, or pitchy, hue.

Very rare near London, but rather abundant in the hilly districts of the north of England and in Scotland. "Derwentwater."—*C. C. Babington, Esq.* "Arbroath, Scotland."—*Mr. Ingsen*. "Longmont, Salop; common in pathways near Shrewsbury."—*Rev. F. W. Hope*. "Kensington Gardens, March 4, 1829."—*A. Cooper, Esq.* "York."—*W. C. Hewitson, Esq.* "Carlisle."—*T. C. Heysham, Esq.* "Marton Lodge."—*L. Rudd, Esq.*

Sp. 6. *reticulata*. *Ovata, subconvexa, nigra, opaca, thorace anticè truncato, elytris trilineatis, interstitiis transversim rugosis.* (Long. corp. 5½—6½ lin.)

Si. *reticulata*. *Fabricius*.—*Steph. Catal.* 76. No. 817.

Ovate; slightly convex, dull black, above glabrous, beneath pubescent; head thickly punctured, with a very obsolete transverse line between the eyes;

thorax slightly convex, truncate anteriorly, the disc thickly punctured; elytra ovate, rounded at the apex, rather convex, with three elevated lines, the two anterior of which are rather obsolete and irregular, the exterior more elevated and abbreviated posteriorly, and terminates in an irregular tubercular elevation; the surface thickly punctured, with somewhat glossy irregular confluent transverse wrinkles on the back.

Not very numerous in the vicinity of London; but found occasionally in some plenty in Epping-forest, near Layton and Walthamstow; also near Hertford, Ripley, Gravesend, &c.; and in Norfolk. "Longmont, Salop."—*Rev. F. W. Hope*. "Parley."—*J. C. Dale, Esq.* "On Crwmllyn Burrows, but rare."—*L. W. Dillwyn, Esq.*

Sp. 7. *opaca*. *Ovata, subdepressa, fusca, tomentosa, thorace anticè truncato, elytris trilineatis apice rotundatis.* (Long. corp.  $4\frac{1}{2}$ — $5\frac{1}{2}$  lin.)

Si. *opaca*. *Linné*.—*Steph. Catal.* 77. No. 818.

Ovate, slightly depressed; brown-black; head broad, punctured, clothed with a dense-brown pubescence; thorax somewhat unequal, the disc anteriorly more convex than the sides and posterior edge, which are somewhat depressed; the disc finely punctured, clothed with a glossy depressed griseous down; elytra ovate, finely granulate-punctate, sparingly clothed with a depressed shining griseous down; the disc depressed, nearly flat, with three elevated lines, the middle longest, the interior more obsolete, the exterior abbreviated, more elevated, and scarcely extending beyond the lateral tubercle: body beneath shining punctate, the apex somewhat ferruginous; legs black; the joints with pale cilia, the claws red.

With the surface above clothed with a glossy golden-yellow pubescence.

Not very common in the vicinity of London; found near Coombe-wood and in Epping-forest. "Aldborough, Suffolk."—*Rev. F. W. Hope*. "Not uncommon on the sand hills (near Swansea)."—*L. W. Dillwyn, Esq.*

b. *Elytra without elevated lines.*

Sp. 8. *lævigata*. *Ovata, convexa, nigra, subnitida, punctatissima, thorace anticè angustato-rotundato, elytris lævibus.* (Long. corp.  $5$ — $6\frac{1}{2}$  lin.)

Si. *lævigata*. *Fabricius*.—*Steph. Catal. p.* 77. No. 819.

Ovate, convex, rather glossy black, thickly and finely punctured; head elongate, thorax anteriorly narrowed, and somewhat semicircular, posteriorly slightly rounded, above moderately convex, finely punctured; elytra large, oblong, the apex obtusely rounded, the disc thickly and somewhat deeply punctate, without elevated dorsal lines.

In some examples there are faint vestiges of dorsal carinæ.

Very abundant throughout the metropolitan district, especially near Hertford; also found in Norfolk, and in several parts of the north of England. "Common throughout Cambs."—*Rev. L. Jenyns*. "Abundant on the coasts of England and Wales."—*Rev. F. W. Hope*. "Kew."—*Rev. T. F. Haverfield*. "Parley."—*J. C. Dale, Esq.* "On the sand hills, and in grass fields (near Swansea), common."—*L. W. Dillwyn, Esq.* "Scarborough."—*T. Bean, Esq.*

#### GENUS CXXXVI.—PHOSPHUGA, *Leach*.

*Antennæ* longer than the thorax, slender, gradually increasing from the base to the apex, which terminates in a distinct triarticulate club, composed of nearly equal joints, the terminal one ovate: *head* narrow; *eyes* small: *thorax* semi-circular; abruptly truncate posteriorly: *elytra* entire; carinated, with a deep marginal canal: *body* oval or subrounded: *legs* rather slender, simple; the *anterior tarsi* dilated in the males.

The genus *Phosphuga* may be known from *Silpha* by the tenuity and length of the antennæ, the capitulum of which is distinctly triarticulate, and composed of nearly equal joints: the head is narrow: the thorax and elytra very deeply margined, the latter entire at the apex; the body rather broadly ovate, or nearly rounded; the legs somewhat slender.

Sp. 1. *atrata*. *Ovata, nigra, elytris rugoso-punctatis lineis tribus elevatis, interioribus longioribus.* (Long. corp.  $4\frac{1}{2}$ — $6\frac{1}{2}$  lin.)

Si. *atrata*. *Linné*.—Ph. *atrata*. *Steph. Catal.* 77. No. 820.

Ovate, glossy black, head thickly punctate; thorax thickly punctate on the disc, which is slightly convex, and rugose-punctate on the sides, which are depressed: elytra throughout closely rugose-punctate, the disc slightly convex, with three abbreviated elevated shining lines, the interior of which, on each elytron, or that next the suture, is longest.

Var.  $\beta$ . With the margins of the thorax and the elytra pale testaceous.

Var.  $\gamma$ . Entirely of a pale testaceous, with the apex of the antennæ fuscous.

Extremely variable both in size and colour.

A very common species: abundant in fields, pathways, the borders of woods, &c., and hibernating beneath mosses, dead leaves, and stones. "Common in Cambs."—*Rev. L. Jenyns*. "Abundant in alder coppices, Salop."—*Rev. F. W. Hope*. "Epping."—*Mr. Doubleday*. "Kew."—*Rev. T. T. Haverfield*. "Glanvilles Wootton."—*J. C. Dale, Esq.* "Not uncommon (near Swansea), under bark and moss in winter, and is often plentiful in summer on the sand hills."—*L. W. Dillwyn, Esq.*



Sp. 2. subrotundata. PLATE xvi. f. 3.—*Subrotundata, nigra, elytris rugoso-punctatis lineis tribus elevatis, mediâ longiori.* (Long. corp.  $5\frac{1}{2}$ —7 lin.)

Ph. subrotundata. Leach.—*Steph. Catal.* 77. No. 821.

Somewhat rounded ovate, deep very glossy black: head deeply punctured: thorax more unequal than in the last, and more irregularly and deeply punctate: elytra broad, coarsely rugose-punctate, with three shining elevated lines on the disc, the middle one, or second from the margin, longest.

Var.  $\beta$ . With the margins of the thorax and elytra of a deep glossy castaneous-brown.

Var.  $\gamma$ . Entirely of a pale glossy castaneous-brown.

Like the preceding, variable both in size and colour—the pale varieties of both are, however, probably immature.

Rare in Britain, but more abundant in Ireland. “Three specimens taken in the south of Ireland.”—*Dr. Leach*. “Near Dublin.”—*Rev. J. Bulwer*. “Taken sparingly about Penllergare in winter, under stones, moss, and the bark of oaks.”—*L. W. Dillwyn, Esq.*

GENUS CXXVII.—AGYRTES, *Frölich*.

*Antennæ* rather longer than the thorax, the basal joints rather abbreviated, the four terminal ones rather stouter, perfoliated; the apical one being ovate.

*Palpi*, maxillary with the terminal joint thicker than the preceding, ovate; labial filiform: *body* ovate, convex: *thorax* rather narrowed in front: *legs* stout; *femora* compressed; *tibiæ* spinose and ciliated.

† Sp. 1. castaneus. *Glaber, nigro-piceus, ore. antennis clytris pedibusque castaneis, clytris punctato-striatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ag. castaneus. *Frölich*.—*Leach (!)*.—*Steph. Catal.* 77. No. 822. note.

Shining smooth, mouth and feet alone villose: head and thorax black, smooth, widely and minutely punctulated: mouth, antennæ, elytra, and legs deep castaneous: scutellum punctulated at the base, smooth at the apex; elytra striated, the striæ ten in number, punctated: body beneath brown-black; apex of the abdomen paler.

Inadvertently stated by Dr. Leach to inhabit England, in the Edinburgh Encyclopædia.

GENUS CXXVIII.—PELTIS, *Kugellan*.

*Antennæ* as long as the thorax, the basal joint dilated, the three last joints large, perfoliated, remote: *palpi* subclavate: *body* ovate, deeply margined, flat beneath: *elytra* entire: back flat.

† Sp. 1. ferruginea. *Ferrugineo-brunnea glabra depressa, elytris lineis elevatis senis, interstitiis duplici ordine punctato-striatis.*

FAMILY XIX.—NITIDULIDÆ, *MacLeay*.

*Antennæ* short, generally abruptly clavate, the capitulum frequently compressed, and mostly composed of two or three joints; which in one genus are soldered into one. *Palpi* usually filiform, short; rarely thickened towards the extremities: *mandibles* elongated, generally emarginate at the apex: *body* depressed, broad; *head* inserted in the thorax up to the eyes: *thorax* subquadrate, or subtrapeziform: *tarsi* pentamerous, with the second and third joints bifid and dilated, the fourth generally minute.

The Nitidulidæ, as Mr. MacLeay observes, “are to be found in almost all substances, some inhabiting flowers and others carrion;”—while many are to be found beneath the bark of trees, in fungi, and in putrescent vegetable matter; upon which the larvæ—which, so far as known, possess considerable resemblance to those of the Silphidæ—subsist. The indigenous genera differ externally by the following, amongst other, characters:

Elytra	{	{	haud abbreviata. <i>Thoracis lateribus</i>	{	<i>Antennarum</i> articulo 3-tio	{	depressis, explanatis.	{	4-to equale:	129. THYMALUS.																											
							{		haud depressis. <i>Antennarum</i> articulo 3-tio	{	4-to multo longiore.	{	rotundato-ovatum:	131. STRONGYLUS.																							
															{	4-to longiore:	130. NITIDULA.																				
																		{	4-to vix longiore:	132. CAMPTA.																	
																					{	<i>Corpus</i>	{	subquadratum:	133. MELIGETHES.												
																										{	elongata, serrata:	134. PRIA.									
																													{	ovata, coarctata:	135. CARPOPHILUS.						
																																{	elongatæ, capitulo obconico:	136. CATERETES.			
																																			{	longitudinalitèr porcata:	137. MICROPEPLUS.
{	<i>Antennæ</i>	{	ovata, coarctata:	135. CARPOPHILUS.																																	
					{	elongatæ, capitulo obconico:	136. CATERETES.																														
								{	longitudinalitèr porcata:	137. MICROPEPLUS.																											

*Si. ferruginea.* Linné.—*Stewart (!)*.—*Pe. ferruginea.* Steph. *Catal.* 77. No. 823. note.

Fuscous-castaneous, with a paler border; thorax with impressed punctures; elytra with six elevated lines on each, three of which are punctulate, the interstices with a double series of excavated punctures.

Stated by Stewart to inhabit Britain, but apparently without any authority:—it is usually found beneath the bark of trees on the continent.

GENUS CXXIX.—*THYMALUS*, *Latreille*.

*Antennæ* rather short, the basal joint elongate, clavate, third and fourth joints equal, gradually thickened to the extremity, the three last joints forming an elongate, compressed, perfoliate club, with the terminal joint orbicular: *palpi* subclavate; terminal joint subovate: *head* very small, concealed by the anterior margin of the *thorax*; which is slightly emarginate, the posterior truncate, and the sides broadly margined and depressed: *elytra* large, entire, subovate, pubescent, deeply margined on the sides, covering the abdomen: *body* convex, subhemispheric: *legs* short, simple: *tarsi* pentamerous, simple.

This genus serves beautifully to unite the Nitidulidæ with the preceding family, to the last genus of which it is so closely allied that most writers have hitherto included them under one name; but from *Peltis*, *Thymalus* differs by its convex, subhemispheric form, shorter antennæ, with its club more coarctate, and dissimilar habit, which is so analogous to that of a *Cassida*, that several authors have placed the only known species in that genus.

Sp. 1. *limbatus*. *Æneo-brunnea, pubescens, limbo sanguineo, elytris punctato-striatis*. (Long. corp.  $2\frac{1}{2}$ —3 lin.)

*Cassida limbata*. *Fabricius*.—*Th. limbatus*. *Curtis*, i. pl. 39. *Steph. Catal.* 97. No. 824.

Brassy-brown, pubescent; head ferruginous, punctured; eyes black; thorax rufo-ferruginous, finely and thickly punctate, with the disc somewhat convex behind, and glossed with æreous; elytra broader than the thorax, very convex, deeply, coarsely, and somewhat irregularly punctate-striate, the margin obscure sanguineous, or rufo-ferruginous; body with legs and antennæ ferruginous; the former punctured.

Discovered several years since in some abundance in the New-forest, by Mr. D. Bydder, and since observed in the same neighbourhood by others. “Near Westerham, in Kent, on a flower.”—*Mr. Ingpen*. “Leeds, by Mr. Denny, who took several.”—*A. H. Davis, Esq.* “Under the bark of an oak near Danygraig, by Mr. Millard, and also under bark in Clive-wood.”—*L. W. Dillwyn, Esq.*

GENUS CXXX.—*NITIDULA Auctorum*.

*Antennæ* very short, the basal joint orbicular, dilated, the third longer than the fourth, the apex terminating in a large, abrupt, broad, coarctate, perfoliate, three-jointed club: *palpi* nearly equal, short, filiform: *head* small, inserted up

to the eyes in the *thorax*, the latter more or less emarginate on its anterior edge, the sides depressed, deeply margined; *elytra* broad, entire, rarely truncate, subovate, glabrous, deeply margined, and in general concealing the extremity of the abdomen: *body* ovate, or elliptic, broad, obtuse, somewhat depressed: *legs* short; *tibiæ* broad, the anterior elongate-triangular; *tarsi* pentamerous, with the third joint dilated and bifid, the following minute, indistinct.

From *Thymalus*, this genus may be known by its more depressed peltate body, but more especially by the structure of its antennæ, of which the basal joint is generally orbicular and considerably dilated, the third joint longer than the fourth, and the capitulum is abrupt, and composed of three broad, coarctate, joints; the *tarsi* have the third joint dilated and bilobed, and the *tibiæ* are broad. The species frequent putrid animal and vegetable substances, old bones, &c., and some few delight in revelling amongst flowers.

A. Thorax with the disc unequal, foveolated.

Sp. 1. *marginata*. *Ovata, ferruginea, elytrorum disco convexo sulcato fusco, parçè ferrugineo maculato.* (Long. corp. 2—2 $\frac{1}{4}$  lin.)

Ni. *marginata*. *Fabricius.—Steph. Catal. 78. No. 825.*

Ovate, ferruginous: head rather dull, finely punctured, eyes prominent, black, thorax with the disc very convex, not foveolated, dull fusco-ferruginous, thickly but very finely punctate; *elytra* ovate, subacuminated behind; the sides deeply margined and ferruginous, the disc convex, thickly punctured, with four sulci, of a dull fusco-ferruginous, with two small spots at the base, and a larger common, truncate, one in the middle, of a brighter ferruginous; body beneath and legs ferruginous.

Very rare: it has been once taken at Birchwood, and two or three times at Coombe. I once captured a single specimen in May, beneath the bark of an old birch, at the latter place, in company with the two following species, which were in plenty. "Netley, under injured bark of oaks."—*Rev. F. W. Hope*. "Bristol."—*Dr. Leach*.

Sp. 2. *punctatissima*. *Ovata, subconveza, obscurè ferruginea, creberrimè punctulata, thorace inæquali elytrisq̃ue nigro variegatis.* (Long. corp. 3—3 $\frac{1}{2}$  lin.)

Ni. *punctatissima*. *Illiger.—Steph. Catal. 78. No. 826.*

Ovate, somewhat convex, dull ferruginous; head unequal, much punctured, obscure dusky between the antennæ posteriorly; eyes prominent, black; thorax deeply notched in front, broader and truncate behind; the sides obscure ferruginous, punctulated; the disc rather convex, unequal, foveolated, obsoletely variegated with black: *elytra* broad, ovate, rounded behind; the disc slightly convex, much punctured, of an obscure ferruginous, variegated with obsolete, irregular, confluent, black marks; and a little beyond

the middle an undated, abbreviated, paler fascia, somewhat variable in different individuals, and on the disc are the rudiments of elevated stræ; body beneath ferruginous; legs rufo-ferruginous.

Much larger than the following species, from which it seems to differ in being shorter and more convex, in proportion to its size.

Not very abundant; found beneath the bark and in holes of decayed oaks, birches, &c., which have been perforated by Cossi, &c., at Coombe. “Shropshire.”—*C. Darwin, Esq.* “Netley.”—*Rev. F. W. Hope.*

Sp. 3. grisea. *Oblongo-ovata, griseo-ferruginea, thorace inequali, elytrisque nigro lineatis maculatisque.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{3}{4}$  lin.)

Si. grisea. *Linné.*—*Linn. Trans.* ii. 86. pl. 5. f. 6—11.—*Ni. grisea. Steph. Catal.* 78. No. 827.

Oblong-ovate; head depressed, ferruginous, punctured; eyes prominent, black; thorax with the disc elevated, unequal, foveolated, griseo-ferruginous, with various, more or less confluent, black marks, elytra oblong-ovate, griseo-testaceous, with obscure elevated costæ, on which are interrupted black lines, which become united and confluent behind the middle, forming a black lobe; body beneath pitchy, with the apex paler; legs pale ferruginous.

Very variable in the colour of the upper surface, and in the extent of the confluent black marks thereon, which are sometimes nearly evanescent; the under side is occasionally of a pale griseous:—from the preceding insect, this chiefly differs in being more oblong, less convex, and of smaller size.

Not uncommon beneath the bark of trees throughout the metropolitan district; also found in Norfolk, Suffolk, &c. “Bottisham.”—*Rev. L. Jenyns.* “Under bark of willows, Plaistow-marshes.”—*Mr. Ingpen.* “Netley, Clinque, &c.”—*Rev. F. W. Hope.* “Epping.”—*Mr. Doubleday.* “Kew.”—*Rev. T. T. Haverfield.* “Walthamstow, common.”—*A. Cooper, Esq.* “Glanvilles Wootton and Hurne.”—*J. C. Dale, Esq.* “In the Penllergare woods.”—*L. W. Dillwyn, Esq.*

Sp. 4. depressa. *Ovata, depressa, brunneo-ferruginea, thoracis disco subfoveolato utrinque nebulo incluso, elytris obsolete nigro-maculatis.* (Long. corp.  $1\frac{1}{4}$ —2 lin.)

Si. depressa. *Linné.*—*Ni. depressa. Steph. Catal.* 78. No. 828.

Ovate, depressed, ferruginous-brown, with the head of a dusky hue, punctured, and with the mouth ferruginous: thorax with the sides much dilated, ferruginous, a distinct curved impression on the disc, the latter dusky, with two obsolete foveolæ behind, the entire surface very thickly punctured; elytra broad, ovate, slightly convex, deeply margined, thickly and finely punctured, dull ferruginous, with obsolete black, oblong streaks, and a little

behind the middle a lunate paler mark; body beneath black-brown, punctate; legs pitchy-ferruginous; antennæ with the club dusky.

Common in old bones, fungi, beneath the bark of trees throughout the metropolitan district. "Bottisham."—*Rev. L. Jenyns*. "On fungi and old wood, Netley."—*Rev. F. W. Hope*. "Glanvilles Wootton."—*J. C. Dale, Esq.* "Occasionally (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 5. Colon. *Ovata, depressa, nigro-fusca, thorace foveolis duabus impressis, margine elytrisque lituris apiceque ferrugineis.* (Long. corp. 1—1 $\frac{3}{4}$  lin.)

Si. Colon. *Fabricius*.—Ni. Colon. *Steph. Catal.* 78. No. 829.

Ovate, depressed, head deeply punctured, pitchy black, mouth pitchy: thorax deeply emarginate in front, truncated behind, the disc thickly punctured, dusky, with two rounded equal foveolæ a little behind the middle, the margins dull ferruginous: elytra ovate, a little convex, finely punctured, pitchy-black, with several minute spots at the base, and a large ovate duplex patch on the disc behind the middle testaceous; near the suture is a single abbreviated stria; body black and punctate beneath: legs dull ferruginous.

Varies considerably in size and in the intensity of its colour: in some examples the posterior blotch on the elytra is interrupted with an undulated transverse dusky mark.

Not uncommon throughout the metropolitan district, frequenting old bones, beneath the bark of decaying trees and in dead carcases. "Bottisham."—*Rev. L. Jenyns*. "Riverhead, Kent."—*Mr. Ingpen*. "Old bones, Netley."—*Rev. F. W. Hope*. "Common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 6. discoidea. *Ovata, depressa, nigra, thorace foveolis duabus impressis, margine elytrisque disco pallide testaceis.* (Long. corp. 1 $\frac{1}{2}$ —2 lin.)

Ni. discoidea. *Fabricius*.—*Samouelle, pl.* 2. f. 5. *Steph. Catal.* 78. No. 830.

Ovate, depressed, black, finely and thickly punctured: head unequal: thorax with two impressed foveolæ, and a narrow ferruginous margin: elytra ovate, griseo-pubescent, with a large pale-testaceous, somewhat orbicular patch at the base, the margins black, a little spotted with testaceous; legs dull ferruginous.

In some examples, the patch on the disc is a little clouded with dusky or black; and in others—probably immature—the entire surface is of a pale, slightly clouded, griseo-ferruginous.

Found with the preceding, but more abundantly. "Bottisham." *Rev. L. Jenyns*. "Netley."—*Rev. F. W. Hope*. "Epping."—*Mr. Doubleday*. "Glanvilles Wootton."—*J. C. Dale, Esq.* "Near Swansea."—*L. W. Dillwyn, Esq.* "Hornsey and Coombe-woods, and Riverhead."—*Mr. Ingpen*.

B. Thorax with the disc equal, smooth.

Sp. 7. *bipustulata*. *Ovata, subdepressa, nigra subobscura, elytris puncto medio rubro, pedibus ferrugineis.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{4}$  lin.)

Si. *bipustulata*. *Linné*.—Ni. *bipustulata*. *Steph. Catal.* 78. No. 831.

Ovate, slightly depressed, deep nearly obscure black, thickly punctulate: thorax slightly emarginate anteriorly, the disc convex, not foveolated: elytra a little convex, the apex very obtuse, or punctured; on each, rather behind the middle, is an ovate, small, rufous spot: legs rufo-ferruginous: antennæ with a large black club.

The red spots are sometimes nearly obliterated.

Less common than either of the two last, and apparently more local: I have taken it in several places within the metropolitan district, in dead carcasses, at Hornsey, Gravesend, Ripley, Hertford, &c. “Bottisham.”—*Rev. L. Jenyns*. “Riverhead, Kent.”—*Mr. Ingpen*. “Netley.”—*Rev. F. W. Hope*. “Plaistow and East Ham marshes.”—*A. Cooper, Esq.* “Glanvilles Wootton.”—*J. C. Dale, Esq.*—“Common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 8. *rufipes*. *Ovata, subdepressa, nigra obscura, vix punctulata, antennarum basi, ore, pedibusque rufo-ferrugineis.* (Long. corp. 1—2 lin.)

Si. *rufipes*. *Linné*.—Ni. *obscura*. *Steph. Catal.* 78. No. 832.

Rather elongate-ovate, somewhat depressed: dull obscure black, faintly punctured: head depressed; mouth rufo-piceous: thorax slightly notched in front, the disc subconvex, the lateral margins rounded, and sometimes rufescent: elytra broad, rather convex, obscure immaculate black, clothed with a very short fuscous pubescence: legs short, robust, rufo-ferruginous: antennæ rufo-ferruginous, with a large black club.

Extremely variable in size, but known from all the rest of the genus by its uniform obscure dull black hue.

Rather abundant, occurring in dead carcasses, putrid fungi, beneath dead leaves, in flowers, &c., throughout the metropolitan district; in Norfolk, Suffolk, Devonshire, &c. “Dead mice, Netley.”—*Rev. F. W. Hope*.—“Glanvilles Wootton.”—*J. C. Dale, Esq.* “Near Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 9. *quadripustulata*. PLATE XVI. f. 4. *Oblongo-ovata, nigro-fusca, elytris maculis duabus testaceo-flavis.* (Long. corp.  $1\frac{3}{4}$  lin.)

Ni. *quadripustulata*. *Fabricius?*—*Steph. Catal.* 79. No. 833.

Oblong-ovate, dull fuscous-black; thorax obscurely margined with rufescent; elytra with two testaceous-yellow spots, one on the disc a little behind the middle, the other towards the angle of the shoulder: legs and antennæ ferruginous, the club of the latter obscure.

Rather variable in size and colour.

As Fabricius in his description says, "maculis duabus rubris," I am doubtful whether the above-described insect is the one mentioned by him.

Not common: the specimen whence the accompanying figure was designed, I obtained from the Marshamian cabinet. The insect has been lately captured near "Chelsea, in old bones."—*Mr. G. Waterhouse.*

Sp. 10. *variata. Oblongo-ovata, subdepressa, nigra, pedibus rufescentibus, elytris testaceis, maculâ communi nigrâ nebulisque duabus flavescentibus.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ni. *variata. Steph. Catal. 79. No. 834.*

Oblong-ovate, subdepressed, dull black: elytra testaceous, or ferruginous, with a subtriangular blacker spot at the base of the suture, and two flavescens ones on the disc: legs and antennæ ferruginous, the latter with the club dusky. Differs from the preceding by its paler hue, and in being more varied in its markings.

In this and the three foregoing species the apex of the abdomen is generally acute, and projects slightly beyond the tip of the elytra.

My own specimens (obtained from the Marshamian collection) are the only examples I have seen. "Taken in bones by Mr. Sheppard."—*Marsham MSS.*

Sp. 11. *oblonga. Oblongo-ovata, depressa, fusco-testacea, creberrimè punctulata, antennarum clavâ atrâ, thorace emarginato, elytris truncatis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ni. *oblonga. Herbst.—Steph. Catal. 79. No. 835.*

Oblong-ovate, much depressed; head somewhat dusky-ferruginous, eyes black: antennæ ferruginous, with the club black; thorax thickly punctured, deeply emarginated anteriorly, fusco-testaceous, with the lateral margins rounded and of a pale testaceous: scutellum fuscous: elytra linear-elongate, depressed, thickly punctured, slightly pubescent, fusco-testaceous, with a slender rather paler margin, the apex truncate: body pitchy-black beneath, with the apex paler: legs obscure testaceous.

Sometimes of a pale testaceous, thickly punctured, with a longitudinal band on the thorax, and the suture of the elytra dusky.

Found beneath the bark of trees; not uncommon in the metropolitan district. "Netley, abundant on flowers, in spring."—*Rev. F. W. Hope.* "Windsor."—*Mr. Waterhouse.*

Sp. 12. *Silacea. Oblongo-ovata, subdepressa, saturatè ferruginea, punctatissima, thorace emarginato, lateribus latè explanato, elytris truncatis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ni. *Silacea. Herbst.—Steph. Catal. 79. No. 836.*



Oblong-ovate, somewhat depressed; head deep ferruginous, thickly punctured; eyes black: antennæ ferruginous, with an oblong acuminate club: thorax narrow before, the anterior margin deeply emarginate, the sides rounded, disc slightly convex, unequal, rather deeply punctured, rufo-ferruginous: scutellum concolorous: elytra broad, ovate, the disc moderately convex, the margin narrow, rufo-ferruginous, subpubescent, slightly punctured: body beneath rufo-ferruginous; legs pale testaceous.

The more expanded lateral margins of the thorax, less depressed body, concolorous scutellum and club of the antennæ, distinguish this from the foregoing insect, which has also the elytra somewhat truncate.

Found in flowers, and beneath the bark of trees; not very abundantly. "Netley."—*Rev. F. W. Hope.*

Sp. 13. *æstiva*. *Oblongo-ovata, depressa, flavo-testacea, thorace vix emarginato, elytris apice truncatis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Si. *æstiva*. *Linné?* Ni. *æstiva*. *Steph. Catal. 79. No. 837.*

Oblong-ovate, depressed, finely punctulate: head pale testaceous; eyes globose, black: thorax narrowed anteriorly, the anterior margin very slightly emarginated, the angles nearly straight, the sides but slightly margined, above rather convex, yellow-testaceous, somewhat pubescent: scutellum concolorous: elytra oblong-ovate, depressed, yellow-testaceous, the apex truncate, with the exterior angle rounded: body beneath flavo-testaceous, with the legs paler.

I have followed Gyllenhal in considering this as the *Silpha æstiva* of Linné, and also in his description of the allied species, with the exception of such as appear to be distinct from any that he has described, from a conviction that it is far better to collate good descriptions with specimens, rather than to rewrite the same, when there is no discrepancy between the two, as in that case the insects intended by the original describer are with more certainty to be identified.

Near London, but not common; in flowers and beneath the bark of trees. "Netley."—*Rev. F. W. Hope.*

Sp. 14. *villosa*. *Ovata, convexa, dilutè testacea, punctatissima, thorace latè emarginato, elytris apice subtruncatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Ni. *villosa*. *Thunberg*.—Ni. *depressa*. *Steph. Catal. 79. No. 838.*

Ovate, convex, thickly punctured; head ferruginous-testaceous, with the eyes black; thorax narrowed in front, with the anterior margin broadly and very deeply emarginated, above convex, slightly pubescent, testaceous, with the sides narrowly flattened, and the margin reflexed; scutellum deeply punctate: elytra broad, ovate, convex, slightly pubescent, pale testaceous, the apex somewhat truncate, with the outer angle rounded; body beneath ferrugineo-testaceous, punctured; legs pale testaceous; antennæ pale ferruginous, with the club concolorous.

The deeply emarginate anterior edge of the thorax, and the more convex ovate body, with subtruncate elytra, distinguish this species.

Not uncommon near London : also found in Norfolk, Suffolk, Devonshire, &c., in flowers. “Near Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 15. *obsoleta. Ovata, depressa, subpubescens, ferruginea, thorace profunde emarginato, lateribus rotundato, elytris apice truncatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Ni. *obsoleta. Illiger.—Steph. Catal. 79. No. 839.*

Ovate, depressed, obtuse, slightly pubescent, ferrugineo-testaceous; eyes black: thorax with the anterior margin broadly and deeply emarginate, the sides greatly rounded, even to the hinder angle, rather convex above, the sides but slightly depressed: elytra broad, slightly convex, impressed about the middle of the back, the apex truncate, with the angles rounded; body beneath convex, finely punctured: legs short, stout, pale testaceous.

Var.  $\alpha$ . With the body beneath and the disc of the thorax and elytra obscure fuscous-brown, the elytra with a paler somewhat rounded spot behind.

Var.  $\beta$ . Paler, with the disc of the elytra obscure, a round dot behind, and a streak anteriorly within the margin, paler.

Var.  $\gamma$ . Entirely pale testaceous, with the eyes black.

Var.  $\delta$ . Ferruginous, with the body beneath, the disc of the thorax, and each elytron with a posterior blotch, narrowed anteriorly, dull fuscous.

Var.  $\epsilon$ . The same, with the body ferruginous, and the disc of the thorax less clouded.

Common beneath the bark of trees, of birch especially, also in flowers, throughout the metropolitan district, in Norfolk, &c. “Bottisham.”—*Rev. L. Jenyns*. “Carfin, Lanarkshire.”—*Rev. F. W. Hope*. “Glanvilles Wootton.”—*J. C. Dale, Esq.* “Cambridgeshire and North Wales.”—*C. Darwin, Esq.*

Sp. 16. *variegata. Convexior, ovata, rufo-ferruginea, thorace emarginato, lateribus explanato, elytris truncatis, puncto medio nigro.* (Long. corp.  $1\frac{1}{4}$  lin.)

Ni. *variegata. Herbst?—Steph. Catal. 79. No. 840.*

Smaller and more convex than the last-mentioned, with the markings different; ovate rufo-ferruginous, thickly and rather deeply punctured; head depressed, with black eyes: thorax with the anterior margin broadly and deeply emarginate, with the sides rounded, rufo-ferruginous, with the disc darker; the scutellum rufo-ferruginous: elytra ovate, deeply margined, the disc slightly convex, clothed with short, pale, shining hairs, with a round black spot in the middle of each elytron, and sometimes a larger fuscous transverse mark within the apex; body beneath glossy piceo-rufous: legs pale reddish.

Rather scarce: found near London, beneath the bark, especially of firs and larches. “Near Swansea, not common.”—*L. W. Dillwyn, Esq.*

Sp. 17. *impressa*. *Ovata, subconvexa, flavo-testacea, thorace anticè emarginato, elytris subtruncatis, suturâ nigrâ.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ni. *impressa*. Kirby MSS.?—*Steph. Catal.* 79. No. 841.

Ovate, slightly convex, testaceous-yellow, rather glossy, finely punctured: head with a deep impression between the eyes, the latter black: thorax with the anterior margin broadly, but not very deeply, emarginate, the sides rounded to the hinder angles: elytra rather broad, deeply margined, the disc slightly convex, the suture fuscous or black, the apex slightly truncate, with the angles rounded: body pale testaceous beneath, with the legs paler.

The short, ovate, subconvex form, with the subtruncate elytra and dark suture, are the chief characters of this species.

Under bark, near London, and in Suffolk.

Sp. 18. *pusilla*. *Oblongo-ovata, depressa, ferruginea, thorace subquadrato emarginato, elytris apice rotundatis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Ni. *pusilla*. Illiger?—*Steph. Catal.* 79. No. 842.

Oblong-ovate, depressed, ferruginous: head thickly punctate; eyes globose, black; thorax subquadrate, with the sides nearly straight, the anterior margin broadly emarginate, the disc rather convex, thickly but very finely punctate, and slightly pubescent: elytra oblong-ovate, a little convex, thickly and finely punctured, pubescent, the apex rounded, and slightly gaping towards the suture: body beneath deep ferruginous; legs rufo-testaceous.

The broad form, with the subquadrate emarginate thorax and rounded apex to the elytra, serve to mark this insect.

Under bark, throughout the metropolitan district, but not common; also in flowers. “Netley, on flowers.”—*Rev. F. W. Hope.*

Sp. 19. *pygmæa*. *Ovata, subdepressa, rufo-brunnea, punctatissima, marginibus testaceis, thorace latè emarginato, elytris apice rotundatis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Ni. *pygmæa*. Gyllenhal.—*Steph. Catal.* 79. No. 843.

Ovate, somewhat depressed, rufo-brunneous, very much and thickly punctured: head unequal, with the eyes globose, black; thorax with the anterior margins broadly emarginate, the sides nearly straight, the margins broadly flattened, and testaceous, the disc subconvex: elytra broad, ovate-convex, slightly pubescent, dull brown, with the margin narrowly pale testaceous, the apex obtuse, rounded: body beneath dusky-brown, much punctured; legs pale testaceous.

Differs from the foregoing in having the thorax more broadly emarginate, the surface deeply punctured, the colour deeper, with the margins pale.

Also found near London, beneath bark; not common.

Sp. 20. *truncata*. *Ovata, subconvexa, punctulatissima, testacea, capite thoraceque obscurioribus, elytris apice subtruncatis.* (Long. corp. 1 lin.)

Ni. *truncata*. Kirby MSS.?—*Steph. Catal.* 79. No. 844.

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Ovate, subconvex, finely punctured: head dusky testaceous; eyes black; thorax subquadrate; narrowly emarginate anteriorly, the sides slightly rounded and but little margined; the disc rather convex, fuscous, the margins paler: elytra ovate, pale testaceous, slightly pubescent, with the apex a little truncate, the angles rounded: body beneath fulvo-testaceous; legs pale testaceous.

The small size of this species, with its ovate form, obscure head and thorax, and subtruncate elytra, distinguish this from the foregoing; as the dark head and thorax do from the following.

Found in Suffolk, Norfolk, near London, and in the New-forest, beneath the bark of trees.

Sp. 21. *affinis. Brevis, ovata, subconvexa, testacea, villosula, thoracis lateribus submarginatis.* (Long. corp. 1 lin.)

Ni. *affinis. Marsham MSS. ?—Steph. Catal. 79. No. 845.*

Short, ovate, subconvex, testaceous, villose: head fulvo-testaceous, with the eyes black; thorax rather glossy, fulvescent, the disc slightly convex, the sides but little margined, the margins pale testaceous; the anterior edge slightly emarginate: elytra short, ovate, immaculate pale testaceous, villose, the apex somewhat obliquely truncate, the angles slightly rounded; body beneath dusky piceous, legs testaceous.

The slightly margined thorax, which, with the head, is fulvescent, separates this from its allies.

From the Marshamian collection; I possess one specimen only: the insect has, I believe, been captured in Suffolk, and near London.

Sp. 22. *melanocephala. Brevis, ovata, subconvexa, rufo-nigra, antennis, elytris pedibusque sordide testaceis.* (Long. corp. 1 lin.)

Ni. *melanocephala. Marsham.—Steph. Catal. 79. No. 846.*

Short, ovate, slightly convex: head and thorax of a dull rufous or pitchy-black, scutellum the same; antennæ and elytra testaceous, the latter obliquely subtruncate, with the angles somewhat acute; the body beneath pitchy-black; acute at the apex: legs pale testaceous.

Known by the dark head and thorax, obliquely truncate elytra, and acute somewhat-prominent abdomen.

Not common: found near London under bark. “Moss from Humby, Dec. 1829.—Do. Seven Oaks.”—*A. H. Davis, Esq.*

Sp. 23. *limbata. Ovata, subconvexa, ferruginea, corpore subtus, thoracis elytrorumque disco postico fuscis, elytris apice rotundatis.* (Long. corp. 1—1 $\frac{1}{4}$  lin.)

Ni. *limbata. Fabricius.—Steph. Catal. 79. No. 847.*

Ovate, subconvex, ferruginous: head convex, thickly punctured, fusco-ferruginous, with the eyes black: antennæ ferruginous, with a large black club:

thorax short, broad, thickly punctured, deeply and broadly emarginate anteriorly, truncate posteriorly, with the sides rounded, the margins considerably expanded and rufo-ferruginous; the disc convex, dusky, with a transverse impression behind: scutellum short, ferruginous: elytra broad, ovate, the apex rounded, the margin broad, reflexed; the disc convex, punctured, fuscous-black, with the limb broadly rufo-ferruginous: body pitchy-black beneath, with the apex rufescent: legs rufo-ferruginous.

Variable: in some examples the disc of the thorax and of the elytra are nearly concolorous: others have the latter with a dusky cloud towards the apex only.

The great width of the insect, with its clouded and rounded apex to the elytra, distinguish this insect.

Rather uncommon; found in grassy banks near Hertford and elsewhere: also in Norfolk and Suffolk. "Netley, in moss during winter."—*Rev. F. W. Hope*. "Taken by Mr. Spence, near Hull, in 1805."—*Marshall MSS.* "North Wales."—*C. Darwin, Esq.*

† Sp. 24. *rufomarginata*. *Ovata, subconvexa, nigra, thoracis elytrorumque marginibus rufis.* (Long. corp. 1 lin.)

Ni. *rufomarginata*. *Davis MSS.*

Ovate, subconvex, black, with the margins of the thorax and of the elytra rufous. Closely allied to the last, but of a deeper hue and broader in proportion. I have had but a casual inspection of the only example that has hitherto occurred; but the above short characters will be sufficient to recognize the insect, which was kindly submitted to my notice by its active and zealous possessor, A. H. Davis, Esq.

A single example taken near "Seven Oaks."—*A. H. Davis, Esq.*

Sp. 25. *decemguttata*. *Oblongo-ovata, subconvexa, fusco-ferruginea, thoracis margine elytrorumque guttis decem pallidis.* (Long. corp. 1—1 $\frac{3}{4}$  lin.)

Ni. *decemguttata*. *Fabricius.—Steph. Catal. 79. No. 849.*

Oblong-ovate, somewhat convex, fusco-ferruginous: head deeply punctured: eyes black, prominent: thorax short, deeply emarginate anteriorly, truncate posteriorly, above thickly and rather deeply punctured, with the lateral margins and a dorsal line, the latter expanded posteriorly, pale griseo-ferruginous: elytra oblong-ovate, with the tip obtuse, rather obliquely truncate, the sutural angle rounded; the disc of each elytron with five pale spots, placed, one on the shoulder, the second large ovate, near the scutellum, the third, angulated, in the middle of the lateral margin, the fourth, slightly wedge-shaped, a little behind the middle near the suture, and the fifth, oblong, near the apex of the margin and frequently confluent with the third: body beneath fusco-testaceous: legs pale testaceous.

The male has the posterior femora slightly dentate.

Rather scarce; taken beneath the bark of birch trees in Coombe-wood, in company with *Ni. punctatissima* and *grisea*. "Under bark (near Swansea), not common."—*L. W. Dillwyn, Esq.*

### GENUS CXXXI.—*STRONGYLUS*, *Herbst.*

*Antennæ* shorter than the thorax, the basal joint large, subcylindric; the second shorter, less robust; the third considerably longer than the fourth, the latter shorter than the fifth, the two following shorter, subtransverse; the eighth very short, transverse, rather broad, the remainder forming an abrupt coarctate compressed club; or with the basal joint very large, lenticular; the second shorter, less robust, subglobose; the third scarcely longer than the fourth, the latter and four following short, of nearly equal length; the remainder forming a dense abrupt, slightly compressed, somewhat globose club: *palpi* filiform: *head* rounded or angulated: *thorax* rather large, convex, the sides not depressed, slightly margined: *elytra* slightly convex, not depressed on the sides, margined, sometimes striated.

The insects of this genus, so far as I have observed, are found exclusively beneath the decaying bark of trees, subsisting upon the putrid sap, or in fungi, and not in or upon dead animals;—they differ chiefly from the *Nitidulæ* in the structure of the antennæ, in having the thorax larger in proportion, and not depressed on its sides, the body more convex:—but from the great discrepancy in the former character amongst the species, I conceive the genus ought to be subdivided; the two last species differing from the preceding, not only by the diversity in the structure of the antennæ hereafter pointed out, but in their general habit.

Whether the name *Strongylus* ought to be retained, I am in doubt, having no means of ascertaining when it was first employed by Herbst, as there is a genus of *Vermes* thus called by Rudolphi, and which may have the priority; and in such case the present must receive a new appellation.

A. With the basal joint of the antennæ subcylindric, the third longer than the fourth, the latter and fifth longer than the two following, the club compressed.

Sp. 1. *strigatus*. *Brevis, ovatus, convexus, nigro-fuscus, marginibus corporeque rufo-picceis, elytris fasciis duabus lobatis pallidis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

*Ni. strigata. Fabricius.*—*St. strigatus. Steph. Catal. 79. No. 850.*

Short, ovate, convex, deep fuscous: head rounded, subemarginate anteriorly, the anterior portion ferruginous: thorax pitchy, with the lateral margins fer-

ruginous, the disc very glossy: elytra very convex, subacuminate at the apex, delicately and thickly punctate; with a slightly flexuous, tricuspid, longitudinal pale mark in the middle of the base, and a little behind the middle of the disc an arcuated transverse pale fascia, not touching the suture; the latter with an impressed stria, abbreviated anteriorly: abdomen and legs pitchy.

Rather scarce: found in some plenty in July, 1825, beneath decayed bark of oaks in Clandon-common: also found in Coombe-wood. “Netley.”—*Rev. F. W. Hope.*

Sp. 2. *imperialis*. PLATE XVI. f. 5. *Ovatus, convexus, nigro-fuscus, ferrugineo marginatus, elytrorum dorso plagâ magnâ communi lobatâ albidâ, nigro-maculatâ.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Ni. *imperialis*. *Fabricius*.—*St. imperialis*. *Steph. Catal.* 80. No. 851.

Ovate, convex, deep fuscous; head sometimes ferruginous; thorax black or pitchy, with all the margins ferruginous: elytra with the margin and suture ferruginous, or testaceous; the disc varied with dusky and white, the ground being of the latter colour, with about four dusky or black spots on each elytrum, one small at the base, two in the middle subconfluent, and a fourth much larger, sublunate, and placed near the suture towards the apex: body pitchy-black: antennæ and legs testaceous.

Gyllenhal suspects that this may be the opposite sex of *St. strigatus*; justly so I think.

Taken in plenty with the preceding insect in Clandon-common, but in other places somewhat rare. I have found the insect at Coombe. “Taken in the Penllergare-woods, not common.”—*L. W. Dillwyn, Esq.*

B. With the basal joint of the antennæ broad lenticular, the third scarcely longer than the fourth, the latter and three following short, of nearly equal length, the club nearly globose, or slightly compressed.

a. *The elytra punctate, naked, not striated.*

Sp. 3. *fervida*. *Oblongo-ovata, convexa, saturatè ferruginea punctatissima, subpubescens, antennarum clavî coarctatâ, elytris apice sæpè fuscis.* (Long. corp. 2 lin.)

Ni. *fervida*. *Olivier*.—*Steph. Catal.* 79. No. 848.

Oblong-ovate, convex, deep glossy-ferruginous, and thickly punctured: head with an impression in the front; eyes black; thorax rather narrow anteriorly, broadly and deeply emarginate in front, the sides rounded, the margin very narrow, above convex: elytra broad, above convex, deeply punctured, the apex obtuse: body beneath deep ferruginous: legs pale ferruginous: antennæ short, ferruginous, with the basal joint greatly dilated, orbiculate, the club large coarctate, somewhat globose and sometimes pitchy-brown.

The anterior and posterior edges of the thorax, with a slender margin to the suture and the apex of the elytra, are sometimes dusky or black.

Rare; I have, as yet, seen two specimens only, which are in my collection, and were captured near London in June: it inhabits fungi.

b. *With the elytra striated, pilose.*

Sp. 4. ferrugineus. *Ovatus, fusco-ferrugineus, densè pubescens, elytris rudè punctato-striatis, pube seriata adpersis.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

Ni. ferruginea. *Fabricius*.—*St. ferrugineus.* *Steph. Catal.* 80. No. 852.

Ovate, dusky-ferruginous, with the head rather darker: thorax stout, broad, deeply emarginate anteriorly, the disc slightly convex, coarsely and obsoletely punctured, densely pubescent, and dull ferruginous: elytra ovate, convex, the apex obtuse, rounded, coarsely punctate-striate, the punctures subocellated, the interstices pubescent, the pubescence disposed in rows: abdomen beneath pitchy-black: legs and antennæ ferruginous.

The head, thorax, and abdomen are sometimes of a deep pitchy-brown.

Found in abundance, in August, 1819, in Lycoperdons, near Dover; also at Guildford, in September, 1821, and at Coombe-wood. "A large brood met with in Lycoperdons on Gogmagog hills, near Cambridge, in October."—*Rev. L. Jenyns*. "Epping."  
—*Mr. Doubleday*.

## GENUS CXXXII.—CAMPTA, Kirby.

*Antennæ* as long as the thorax, the basal joint larger, subcylindric, the second smaller and shorter, subglobose, the three following of equal length, elongate, subclavate, the sixth to the eighth very short, subglobose, the remainder forming an abrupt, elongate, somewhat loosely perfoliate compressed club, with the terminal joint ovate. *Palpi* filiform: *head* angulated, tomentose: *thorax* large, broad, very convex, tomentose, the sides not depressed, slightly margined, and rounded: *elytra* broad, anteriorly convex, posteriorly a little deflexed, the apex rounded, scarcely concealing the extremity of the abdomen: *body* rounded ovate.

*Campta* differs chiefly in external characters from *Strongylus* by having the body shorter, thickly tomentose above, the third, fourth, and fifth joints of the antennæ of nearly equal length, somewhat elongate, with the club more loosely perfoliated.

Sp. 1. lutea. *Flavo-testacea, tomentosa, thorace fornicato dilatato, elytris apice dilatatis.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

*St. luteus.* *Herbst*.—*Ca. lutea.* *Steph. Catal.* 80. No. 853.

Rounded ovate, testaceous-yellow, with the eyes above black, the upper surface clothed with a close decumbent pale down; the lower glabrous; the thorax



very convex, the sides dilated, and slightly margined: antennæ and legs testaceous: body beneath glossy, punctate.

Var.  $\beta$ . *Steph. Catal. l. c.*—With the body beneath somewhat tomentose.

Abundant on flowers at Darent-wood in the beginning of June; less common in other places: I have taken a few specimens near Ripley, on the flowers of the Dogwood. “Occasionally taken among herbage (near Swansea).”—*L. W. Dillwyn, Esq.*

### GENUS CXXXIII.—MELIGETHES, *Kirby*.

*Antennæ* as long as the thorax, the basal joint large, robust, the second short, less robust, subquadrate, the third as long as the first, subclavate, the two following united about the length of the third, the two next very short, transverse, the eighth still shorter, broad, the three terminal ones forming an abrupt compressed club. *Palpi* short, filiform: *head* small, angulated: *thorax* rather large, convex, the sides not depressed, rounded, slightly margined: *elytra* broad, ovate, convex, the apex sometimes rather truncate, the sides slightly margined: *body* subquadrate: *tibiæ* sometimes spinulose.

The species of *Meligethes*, which require a more critical examination than I have leisure to devote to them, are amongst the smallest of the Nitidulidæ, from the other genera of which they principally differ, by having the antennæ with the third joint about as long as the two following united, the sixth and seventh joints very short, the eighth still shorter; exclusively of their habit: they are usually of dark, sometimes metallic, colours, and are generally found in flowers.

Sp. 1. *Dulcamaræ*. *Fusco-olivaceus, scutello abdomineque nigris.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

*Laria Dulcamaræ*. *Scopoli*.—*Me. Dulcamaræ*. *Steph. Catal.* 80. No. 854.

Oblong-ovate; fusco-olivaceous, slightly pubescent, with the head, scutellum, suture of the elytra, and abdomen deep fuscous or black; the thorax broad, with its anterior margin entire: legs pale testaceous.

Less common than several of the following species; taken in grassy banks, amongst flowers, near Hertford, Ripley, Coombe-wood, &c.; also in Norfolk and Suffolk. “Near Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 2. *rufipes*. *Brevis, ovatus, convexus, obscure niger, subpubescens, thorace anticè emarginato, pedibus rufo-testaceis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

*Si. rufipes*. *De Jean*.—*Me. rufipes*. *Steph. Catal.* 80. No. 855.

Short ovate, convex, obscure black, slightly pubescent, the pubescence of a rich

golden hue, in certain positions: mouth pitchy-red: antennæ ferruginous, with the club black: thorax broad, slightly emarginate anteriorly, the sides rounded, the margin a little reflexed, ferruginous; the disc very convex: elytra thickly and distinctly punctured, slightly pubescent, the apex obtuse, sublunate: legs short, stout, rufo-testaceous.

Varies slightly in the colour of the legs, being sometimes pitchy-brown, with the tarsi and anterior tibiæ paler.

Extremely abundant in flowers throughout the metropolitan district. "Netley."—*Rev. F. W. Hope*. "Very common on flowers (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 3. *flavimanus*. *Brevis ovatus, convexus, obscurè niger, subpubescens, thorace anticè emarginato, pedibus anticis rufo-testaceis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Me. *flavimanus*. *Kirby MSS.*—*Steph. Catal.* 80. No. 856.

Short ovate, convex, dull black, slightly pubescent, the thorax anteriorly somewhat emarginate; the anterior legs rufo-testaceous.

The rufo-testaceous anterior legs distinguish this from the preceding insect, of which I suspect that it is merely a variety; as that species is prone to vary, and the above is the only material character of distinction between the two.

Found in Suffolk: from the Marshamian collection. "Not uncommon on flowers (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 4. *viridescens*. *Oblongo-ovatus, convexior, ferè glaber, viridi-cæruleus nitidus, antennarum basi pedibusque rufo-testaceis, tibiis anticis muticis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Ni. *viridescens*. *Fabricius.*—Me. *viridescens*. *Steph. Catal.* 80. No. 857.

Oblong-ovate, convex, nearly smooth, above of a brilliant glossy-green or black-blue; head thickly punctured; antennæ with the base rufo-testaceous, the club large, fusco-ferruginous: thorax thickly punctate, with the disc glabrous and the margins slightly pilose: elytra rather deeply but sparingly punctate, glabrous: legs stout, rufo-testaceous, the joints sometimes dusky, the anterior tibiæ arcuated, not spinulose on the external edge, but with two or three minute denticulations sometimes at the apex.

Variable in the colour of its upper surface; from different shades of green to intense deep black-blue.

"Bottisham."—*Rev. L. Jenyns*. "Netley."—*Rev. F. W. Hope*.

"Near Swansea, not uncommon."—*L. W. Dillwyn, Esq.*

Sp. 5. *cæruleus*. *Oblongo-ovatus, minus convexus, tenuè pubescens, suprà aut cærulescenti-niger, aut cæruleus, aut violaceus, pedibus nigricantibus.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Ni. *cærulea*. *Marsham.*—Me. *cæruleus*. *Steph. Catal.* 81. No. 858.

Oblong-ovate, less convex than the last, slightly pubescent, above blue-black or blue, or violet: the legs dusky, with the anterior tibiæ paler.

Probably a variety of the foregoing; from which it chiefly differs in the duski-ness of its legs.

Common in flowers, in May and June, throughout the metro-politan district. “Bottisham.”—*Rev. L. Jenyns*. “Netley.”—*Rev. F. W. Hope*. “Not unfrequent (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 6. *Urticæ*. *Oblongo-ovatus, obscure virescente-æneus, pedibus rufescentibus, femoribus piceis.* (Long. corp 1 lin.)

Ni. *Urticæ*. *Samouelle*.—Me. *Urticæ*. *Steph. Catal.* 81. No. 859.

Oblong-ovate, dull greenish-brass, with the legs rufescent and the femora pitchy.

Very similar to the last, but with the upper surface of an æneous tinge, the femora pitchy, and the tibiæ and tarsi rufescent:—I conceive it to be a mere variety of *Me. viridescens* or *cæruleus*.

Found in hedges where flowers abound, near London: also in Norfolk. “Bottisham.”—*Rev. L. Jenyns*. “Netley.”—*Rev. F. W. Hope*.

Sp. 7. *nigrescens*. *Oblongo-ovatus, subconvexus, subpubescens, nigro-fuscus, antennis pedibusque nigricantibus.* (Long. corp. 1— $1\frac{1}{4}$  lin.)

Me. *nigrescens*. *Steph. Catal.* 81. No. 860.

Oblong-ovate, slightly convex and pubescent; above of a deep fuscous-black, with the antennæ and legs entirely dusky.

The dusky antennæ and legs, with the deep fuscous upper surface of the head, thorax, and elytra, distinguish this from all the foregoing species of this genus.

Taken in flowers near London; at Ripley, Hertford, &c.

Sp. 8. *Pedicularius*. *Brevis, ovatus, convexus, niger, nitidus, thorace pulvinato anticè parum emarginato, tibiis compressis angulatis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

Si. *Pedicularia*. *Linné*.—Me. *Pedicularius*. *Steph. Catal.* 81. No. 861.

Short, ovate, convex, glossy-black, punctate: antennæ dull-ferruginous at the base, the club obtuse, black; thorax very slightly emarginate anteriorly: elytra black, obscurely glossed with æneous: legs either pitchy or dull-testaceous, short, stout, compressed, the tibiæ dilated towards the apex, outwardly ciliato-denticulate, the posterior in the middle obtusely angulated.

Common throughout the metropolitan district in flowers during May and June. “Bottisham.”—*Rev. L. Jenyns*. “On flowers

common, particularly about Crwmllyn Burrows.”—*L. W. Dillwyn, Esq.*

Sp. 9. *xanthoceros*. *Oblongo-ovatus, niger, punctulatus, subpubescens, thorace brevi, anticè vix emarginato, antennis pedibusque flavo-testaceis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

Me. *xanthoceros*. *Steph. Catal.* 81. No. 862.

Oblong-ovate, black, punctured, slightly pubescent, the thorax very short, scarcely emarginate anteriorly; the antennæ and legs testaceous-yellow, the anterior tibiæ denticulate externally.

Allied to *Ni. serripes* of Gyllenhal, but the antennæ are testaceous-yellow, whereas in his insect they are black, with the central joints piceous:—it may be a variety of that insect.

Found near London in flowers.

Sp. 10. *nigricornis*. *Oblongo-ovatus, viridi-niger, punctulatus, thorace anticè subemarginato, antennis pedibusque nigris.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

Me. *nigricornis*. *Kirby MSS.—Steph. Catal.* 81. No. 863.

Oblong-ovate, black, punctulated; the thorax slightly emarginate anteriorly, the legs entirely black, the anterior tibiæ denticulate, the antennæ also black.

In the darkness of the antennæ this somewhat agrees with Gyllenhal's *Ni. serripes*, but it differs in having the legs entirely black; whereas in Gyllenhal's insect they are pitchy-black, with the anterior paler.

Not found near London: my specimens I obtained from the Marshamian cabinet. “Occasionally found (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 11. *subrugosa*. *Brevis, ovatus, convexa, niger punctatissimus, elytris transversim subrugosis, antennarum clavâ oblongâ.* (Long. corp.  $\frac{1}{2}$ —1 lin.)

*Ni. subrugosa*. *Gyllenhal.—Me. subrugosus.* *Steph. Catal.* 81. No. 864.

Short, ovate, convex, black, thickly punctured; antennæ black, with an oblong rather slender subacuminated club: thorax anteriorly very slightly emarginate: elytra very thickly punctured, the puncta transversely confluent, giving the appearance of being slightly wrinkled, the disc clothed with a delicate griseous pubescence: legs pitchy-black.

The short ovate form, thickly punctate, transversely wrinkled surface of the elytra, distinguish this species from its allies.

Found in flowers, within the metropolitan district. “Netley.”—*Rev. F. W. Hope.*

Sp. 12. *nigrinus*. *Brevis, ovatus, ater, glaberrimus nitidus, antennis pedibusque nigris, thorace anticè vix emarginato.* (Long. corp.  $\frac{1}{4}$ —1 lin.)

*Ni. nigrina.* *Marsham.*—*Me. nigrinus.* *Steph. Catal.* 81. No. 865.

Short, ovate, black, very smooth and glossy, the thorax scarcely emarginate anteriorly, the antennæ and legs black; elytra subtruncate.

The brevity and glossiness of this insect, with its dark antennæ and legs, point out its distinction from its congeners.

Found near London, and in other parts: I have received it from Norfolk and Yorkshire.

Sp. 13. *erythropus.* *Brevis, ovatus, nigro-æneus, punctatissimus, thorace vix emarginato, antennis pedibusque rufis.* (Long. corp.  $\frac{1}{2}$ —1 lin.)

*Ni. erythrope.* *Marsham.*—*Me. erythropus.* *Steph. Catal.* 81. No. 866.

Short, ovate, convex, of a blackish-brass, or deep black, very much punctulate, with the anterior margin of the thorax scarcely emarginate; antennæ dusky-ferruginous, or rufous; elytra ovate, black, slightly glossed with æneous, the sides margined, the apex truncate: legs pale or dark ferruginous; tibiæ ciliated.

The truncate apex to the elytra, rufous antennæ and legs, and short, ovate form, are the chief characters of this small species.

Common in flowers near London. “Bottisham.”—*Rev. L. Jenyns.* “Netley.”—*Rev. F. W. Hope.* “Near Swansea, not common.”—*L. W. Dillwyn, Esq.*

#### GENUS CXXXIV.—PRIA, *Kirby.*

*Antennæ* longer than the thorax, the basal joint very large and robust; the second smaller, less robust; the third rather longer than the second, which is of equal length with the fourth; fifth the same, obconic; sixth and seventh short, transverse, the latter rather tumed; eighth also short, broad, with a process on the exterior edge; ninth and tenth gradually larger, each with a process on the outer edge; eleventh ovate; the four last-mentioned articulations forming the club. *Head* broad, rounded anteriorly: *thorax* short, not emarginate anteriorly, the sides gradually rounded, and slightly margined, the hinder angle rather acute: *body* pubescent above: *elytra* convex, punctured, slightly margined, truncate: *legs* short, stout: *tibiæ* compressed, spinulose exteriorly.

This singular genus, of which the only species known bears considerable resemblance to *Mel. Dulcamaræ*, may be distinguished from the foregoing, by having the club of the antennæ—which is composed of four joints—serrated, the elytra subtruncate, the body slightly depressed, with its sides nearly parallel, and but little

margined; the sixth and seventh joints of the antennæ have a slight process towards their apex externally.

Sp. 1. *truncatella*. *Fusco-testacea, subpubescens, pedibus testaceis*. (Long. corp.  $\frac{2}{3}$  lin.)

Si. *truncatella*. *Marsham*.—Pr. *truncatella*. *Steph. Catal.* 81. No. 867.

Oblong-ovate, pale fusco-testaceous, slightly pubescent, with the margins of the thorax and of the elytra paler; the latter with a single stria near the suture, which is fuscous: legs and antennæ pale testaceous, the latter with the capitulum somewhat dusky: eyes black.

I possess a single specimen only of this insect from the Marshamian collection; a second found by myself near London; and in the collection of Mr. Kirby, I believe, there is a pair; which are the only individuals I have as yet observed: it inhabits flowers.

#### GENUS CXXXV.—CARPOPHILUS, *Leach*.

*Antennæ* with the basal joint large, subcylindric; the second less robust, shorter; the third obconic, shorter than the second; the fourth to the eighth very short, transverse, indistinctly articulated; the eighth to the eleventh forming a large elongate-ovate club: *head* angulated: *thorax* somewhat rectangular, slightly margined on the sides and at the base: *body* glabrous, oblong-ovate: *elytra* nearly flat, about half the length of the abdomen, obliquely truncate: *abdomen* rather stout, obtuse and punctate at the apex: *legs* short, stout: *tibiæ* dilated; spinulose exteriorly, and at the apex.

Whether this genus be truly indigenous is very doubtful; Linnæus gives the first species as a native of Surinam, but Gyllenhal says of it, “habitat in frutetis et floribus apud nos rarius:”—it certainly is frequently taken at large in England, but more frequently occurs in brown sugar. De Jean obtained his specimens from Spain, and Fabricius says, “habitat in Galliâ meridionali.”

From the preceding genera of this family, the very short, obliquely truncate elytra, exclusively of the different structure of the antennæ, the third joint of which is not larger than the second, at once remove this genus.

Sp. 1. *hemipterus*. *Oblongo-ovatus, supra nigro-fuscus, pubescens, elytris maculâ humerali apiceque latè flavis, pedibus ferrugineis*. (Long. corp.  $1\frac{1}{2}$ —2 lin.)

De. *hemipterus*. *Linn?*—Ca. *flexuosus*. *Steph. Catal.* 81. No. 868.

Oblong-ovate, above black-brown, pubescent; punctate: mouth ferruginous: antennæ with the club fuscous: thorax with the lateral margin sometimes dull-ferruginous: scutellum fusco-ferruginous; elytra obsoletely punctate, obscure black, with a spot on the shoulder, sometimes a larger sinuated one and a smaller punctiform one, and the apex broadly and wavyly yellow; the abdomen above, beyond the elytra, pitchy-black, punctate: body beneath fusco-ferruginous: legs rufescent.

Varies: in some examples the yellow markings on the elytra are much larger, and there is frequently a flexuous black fascia above, beyond the middle, dilated towards the suture:—others are pale testaceous, with fuscous markings.

See remarks under the genus, respecting the propriety of considering this as an indigenous species: it frequently occurs, as there mentioned, in brown sugar; and occasionally out of doors: it has been found in Suffolk, Norfolk, South Wales, &c.

Sp. 2. *pusillus*. *Oblongo-ovatus, supra nigro-fuscus, subpubescens, elytris fusco-testaceis, corpore subtus pedibusque rufo-testaceis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ca. *pusillus*. *Steph. Catal.* 81. No. 869.

Oblong-ovate, deep fuscous above, and slightly pubescent, with the elytra testaceous-brown, immaculate; the body beneath, legs, and antennæ rufo-testaceous.

Var.  $\beta$ . The elytra with a pale testaceous spot at the apex.

Considerably smaller than the preceding, and much less distinctly punctate on the head and thorax, the elytra of a darker hue, and nearly, or totally, immaculate.

Taken near London.

## GENUS CXXXVI.—CATERETES, *Herbst*.

*Antennæ* longer than the thorax, the two basal joints not very dissimilar in size; the third not longer than the following, the three last forming an elongate, somewhat obconic, compressed, club: *Palpi*, *labial* with the terminal joint incrassated: *head* large, angulated: *thorax* large, slightly margined, sometimes rounded at the angles, and in some cases rather narrowed behind: *scutellum* very distinct: *body* ovate: *elytra* truncate, much shorter than the abdomen.

The elongate antennæ, with a slender, elongate, obconic club, the truncate elytra and short ovate form of the insect, readily point out the peculiarities of this genus, which consists of small species, whose delight is in revelling amongst flowers.

Sp. 1. *bipustulatus*. *Oblongo-ovatus, niger, profundè punctatus, elytris maculâ magnâ mediâ antennæ pedibusque pallidè rufis.* (Long. corp.  $1\frac{1}{4}$ —2 lin.)

De. *bipustulatus*. *Paykul*.—Ca. *bipustulatus*. *Steph. Catal.* 82. No. 870.

Oblong-ovate, black, deeply punctured; head pitchy; mouth rufescent: antennæ pale rufo-testaceous: thorax transversely ovate, black or piceous: elytra broad, slightly convex, the apex truncate, much shorter than the abdomen, thickly and deeply punctate, black, with a larger pale-rufous angulated spot in the middle: legs pale rufescent.

Var.  $\beta$ . *Steph. Catal. l. c.*—Ferruginous-black, with the elytra ferruginous, the margin, angle of the scutellum; and apex black.

Var.  $\gamma$ . *Steph. Catal. l. c.*—Ferruginous, with the abdomen fuscous.

Found in marshy situations near London, in Battersea-fields especially; also in Suffolk and Norfolk. “Netley.”—*Rev. F. W. Hope*. “On *Caltha palustris*, and other marsh-plants, on the borders of Sketty-bog.”—*L. W. Dillwyn, Esq.*

Sp. 2. *pedicularius*. *Oblongo-ovatus ferrugineo-testaceus, profundè punctatus, oculis atris, pectore brunneo.* (Long. corp.  $1-1\frac{1}{2}$  lin.)

De. *Pedicularius*. *Linné*.—Ca. *Pedicularius*. *Steph. Catal. 82. No. 871.*

Oblong-ovate, ferruginous-testaceous, deeply punctate: eyes black: antennæ ferruginous, with the club dusky: thorax transversely ovate, subtruncate anteriorly, slightly convex: elytra broad, slightly convex, ferruginous, or pale testaceous, rather pubescent: body beneath brown, with the apex paler: legs short, stout, pale testaceous, the tibiæ slender at the base, much dilated at the apex.

Var.  $\beta$ . Rufo-testaceous, with the base of the abdomen fuscous or deep glossy-black, the scutellum and suture more or less fuscous.

Considerably smaller than the foregoing, which it closely resembles.

Not uncommon in damp hedges amongst the flowers of aquatic plants, near London. “Netley.”—*Rev. F. W. Hope*. “Among herbage (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 3. *Urticæ*. *Oblongo-ovatus, nigro-subæneus, profundius punctatus, antennis pedibusque rufo-pallidis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

De. *Urticæ*. *Fabricius*.—Ca. *Urticæ*. *Steph. Catal. 82. No. 872.*

Oblong-ovate, somewhat brassy-black, slightly villose, deeply punctate; head black, thorax rather rounded in front, very convex, black, or glossed with æneous: scutellum æneous: elytra broad, convex, much shorter than the abdomen, black or æneous: abdomen subacuminated, punctured, black: antennæ pale rufous, legs the same, stout.

Differs in having the body brown or dull-ferruginous; and in being of a deeper black, with the antennæ dusky, and legs piceous.

Abundant amongst nettles throughout the metropolitan district,



and in other parts of the country. “Netley.”—*Rev. F. W. Hope.*  
 “On *Urtica dioica*, and among herbage, common (near Swansea).”  
 —*L. W. Dillwyn, Esq.*

Sp. 4. *Linariæ*. *Oblongo-ovatus, ater, antennis tarsisque anterioribus ferrugineo-rufis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Ca. *Linariæ*. *Kirby MSS.—Steph. Catal. 82. No. 873.*

Larger than Ca. *Urticæ*, which it much resembles; oblong-ovate, deep black, slightly pubescent, finely punctate: thorax broad; elytra truncate; legs black or pitchy, with the anterior tarsi, and the antennæ ferruginous-red.

Inhabits the flowers of *Linaria*, not uncommon: found near London and in Suffolk.

Sp. 5. *nitidus*. *Oblongo-ovatus, convexus, piceo-ferrugineus, nitidus, antennis pedibusque pallide rufis.* (Long. corp. 1 lin.)

Ca. *nitidus*. *Kirby MSS.—Steph. Catal. 82. No. 874.*

Oblong-ovate, convex, pitchy-ferruginous, punctulated, glossy, with the antennæ and legs pale rufous.

Distinguished from Ca. *Linariæ* by its piceo-ferruginous colour, and pale legs and antennæ.

Found in Suffolk; near London and Bristol, in damp hedges.

Sp. 6. *ruficornis*. *Oblongo-ovatus, convexus, ater, punctulatus, antennis pedibusque rufis.* (Long. corp.  $\frac{1}{2} - \frac{3}{4}$  lin.)

Ni. *ruficornis*. *Marsham.—Ca. ruficornis. Steph. Catal. 82. No. 875.*

Oblong-ovate, convex, deep glossy-black, punctulated; with the antennæ and legs rufous.

Resembles Ca. *Linariæ*, but is considerably smaller, and has the legs anteriorly rufous: differs from the preceding species by its smaller size and black colour.

Not common on flowers near London. “Common among herbage (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 7. *pyrrhopus*. *Oblongo-ovatus, niger, punctatus, antennis pedibusque rufis.* (Long. corp. 1 lin.)

Ni. *pyrrhopa*. *Marsham.—Ca. pyrrhopus. Steph. Catal. 82. No. 876.*

Oblong-ovate, deep glossy-black, punctate; with the legs and antennæ rufous. Very similar to the last, but considerably larger, less convex, and more deeply punctate.

Taken amongst herbage in the vicinity of London. “Netley.”  
 —*Rev. F. W. Hope.*

Sp. 8. *rufilabris*. *Nigro-nitidus, vagè punctatus, elytris subrugulosis, illorum margine postico, ore, antennis pedibusque rufis*. (Long. corp.  $\frac{3}{4}$ —1 lin.)

Ce. *rufilabris*. *Latreille*.—Ca. *rufilabris*. *Steph. Catal.* 82. No. 877.

Ovate, glossy-black, coarsely and irregularly punctate, clothed with a griseous pubescence, with the last segment of the abdomen above nearly glabrous: the thorax transverse subquadrate, a little narrowed in front; the elytra somewhat rugulose, their hinder margin, the mouth, antennæ, and legs rufous.

Taken in damp places, amongst carices and junci. “On carices in Crwmllyn Bog, and not unfrequently among herbage.”—*L. W. Dillwyn, Esq.*

Sp. 9. *Junci*. *Niger, punctatissimus, antennis pedibus anoque rufis, capite thoraceque piceis*. (Long. corp.  $\frac{3}{4}$  lin.)

Ca. *Junci*. *Kirby MSS.*—*Steph. Catal.* 82. No. 878.

Black, much punctulate: with the head and thorax pitchy; the antennæ, legs, and exposed portion of the abdomen above rufous; the latter at the base beneath black.

The piceous head and thorax, with the pale rufous antennæ, legs, and anus, sufficiently characterize this species.

Found in damp places where rushes abound; near Bristol and Hull. “Netley.”—*Rev. F. W. Hope*.

Sp. 10. *Caricis*. *Niger nitidus, punctatissimus, antennis pedibusque rufis, ano piceo*. (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

Ca. *Caricis*. *Spence MSS.*—*Steph. Catal.* 82. No. 879.

Deep glossy-black, very much punctulated, with the antennæ and legs rufous; the extremity of the abdomen pitchy-black.

Resembles Ca. *Urticæ* in colour, but is rather smaller, more slender and convex, and has the extremity of the abdomen piceous.

Found in carices near Hull, and in Norfolk. “Netley.”—*Rev. F. W. Hope*.

Sp. 11. *Agarici*. *Nigro-piceus, punctatissimus, subnitidus, antennis pedibusque piceo-rufis*. (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

Ca. *Agarici*. *Kirby MSS.*—*Steph. Catal.* 82. No. 880.

Pitchy-black, very much punctulated; slightly glossy; with the antennæ and legs pitchy-red; the elytra somewhat pubescent.

Very small, and known by its pitchy-black or brown hue, with the legs and antennæ paler.

Taken but rarely near Bristol and in Suffolk.

GENUS CXXXVII.—MICROPEPLUS, *Latreille*.

*Antennæ* shorter than the thorax, received during repose in a groove on the under side of the margin of the latter, the two basal joints larger than the following, the first subovate, the second pear-shaped, the six following decreasing in length, the rest forming a large solid globose pubescent club.

*Palpi*, *maxillary* small, incrassated in the middle and attenuated to the apex; *labial* minute: *head* subtrigonal, inserted up to the *eyes*, which are small, into the *thorax*, the latter narrowed anteriorly, with the angles acute: *elytra* quadrate, margined, very much abbreviated, with three elevated lines on each; *abdomen* acuminate at the tip: *legs* slender; *tibiæ* simple; *tarsi* four-jointed.

The singular genus *Micropeplus* may be readily known from the other genera of this family, by the abbreviated, longitudinally porcate, *elytra*, and by the solid capitulum of the *antennæ*; which latter are placed during repose in a cavity on the under surface of the sides of the thorax.

Sp. 1. *porcatus*. *Niger, obscurus, antennarum basi pedibusque rufo-testaceis, thoracis lateribus undulatis*. (Long. corp.  $\frac{3}{4}$ —1 lin.)

St. *porcatus*. *Paykul*.—Mi. *porcatus*. *Steph. Catal.* 82. No. 881.

Dull black; minutely and thickly punctured: head depressed: thorax very unequal, the sides flat and prominent, with a minute denticulation in the middle, the disc deeply foveolated, with two larger impressions at the hinder angles: scutellum punctulated: the *elytra* with the exterior angles obtusely rounded; the disc convex, a little depressed near the tip; each *elytron* with three elevated smooth lines, exclusively of the suture and margin, the interstices thickly and deeply punctate: abdomen above with transverse and longitudinal elevated lines, giving it a latticed appearance, the interstices being somewhat deep: *antennæ* at the base and the legs rufo-testaceous, or ferruginous.

Vár.  $\beta$ . With thorax and *elytra* dusky reddish-brown.

Found in various places within the metropolitan district; also in Norfolk, Suffolk, Devonshire, &c., from April to November, and hibernates beneath moss. “Moss, Netley.”—*Rev. F. W. Hope*. “Hurne.”—*J. C. Dale, Esq.* “Among grass on Crwmllyn Burrows, not common.”—*L. W. Dillwyn, Esq.* “Petworth, Sussex, in August, and under hay placed on barked trunks of felled trees in damp situations in Kensington Gardens, 20th May, 1830, in company with *Atomariæ*. Motion very slow.”—*Mr. Westwood*.

Sp. 2. *staphylinoides*.—PLATE xvi. f. 6.—*Niger, subnitidus, antennis pedibusque rufo-ferrugineis, thoracis lateribus integris rufis*. (Long. corp.  $\frac{3}{4}$  lin.)

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Ni. staphylinoides. *Marsham.—Steph. Catal.* 83. No. 882.

Rather glossy-black, punctulate: head flat, with two oblique sulci on the forehead: thorax unequal, with the sides expanded, rufous, not denticulated; the disc pitchy-black, impunctate, with a rather deep fovea anteriorly, and three more obsolete parallel oblong ones posteriorly: scutellum smooth: elytra not dilated towards the apex, with the exterior angle obliquely subangulated, the disc glossy-black, with three elevated smooth lines, the interstices very smooth and shining: abdomen as in the preceding insect, but the longitudinal costæ less elevated, and the foveæ less profound: antennæ totally, and legs rufo-ferruginous.

Less common than the last: found about London; in Devonshire; near Bristol; and in Ireland. “Bottisham, common under stones.”—*Rev. L. Jenyns*. “Under the splinters of timber recently cut up by the sawyers, Netley.”—*Rev. F. W. Hope*. “Among herbage on Crwmlyn Burrows.”—*L. W. Dillwyn, Esq.*

†Sp. 3. *Tesserula. Piceo-niger, nitidus, antennarum basi? pedibusque ferrugineis, thoracis lateribus dilatatis ferrugineis.* (Long. corp.  $\frac{3}{4}$  lin.?)

Mi. *Tesserula. Curtis, v. pl.* 204.—*Steph. Catal.* 409. No. 882\*.

“Pitchy-black, shining, very minutely and thickly punctured: head depressed and hollowed, with three ridges at the base: thorax with the sides flat, dilated, and ferruginous, the angles acute, a broad channel down the centre, a little narrowed beyond the middle, close to which on each side is a fovea: elytra with three elevated lines on each, one being close to the external margin, the interstices being perfectly smooth, but very minutely punctured: abdomen with five joints uncovered, sides reflexed: slightly carinated down the back, with an interrupted elevated line on each side: legs ferruginous.”—*Curtis, l. c.*

“Taken out of a pond in a marsh near Belfast, in the county Down, early in February, 1827, by Mr. Haliday.”—*Curtis, l. c.*

## FAMILY XX.—ENGIDÆ, *Mac Leay.*

*Antennæ* rather short, gradually thickening to the apex, and forming a more or less distinct rarely abrupt club, the clava generally of two or three joints, in some of the true fungivorous genera four, or five: *palpi* generally very short, filiform or slightly clavate: *mandibles* usually emarginate at the apex: *head* ovate or triangular, deeply inserted into the anterior margin of the *thorax*, which is transverse, and varies in form: *body* generally elongate, linear, more or less depressed: *tarsi* pentamerous, or tetramerous, rarely heteromerous,

the articulations generally entire; in some genera the third joint slightly dilated and bilobed.

The more elongate, sometimes linear, form of the body of the Engidæ, combined with the generally simple joints of the tarsi, and less abruptly clavate antennæ, distinguish them from the Nitidulidæ. The family evidently requires subdivision, although in habit and economy, so far as known, there is great similarity, which probably only arises from the juxtaposition of the genera of which it is at present composed: the species usually subsist on decaying vegetable matter, either fungi, agarics, the putrid sap of decaying trees, or upon flowers; they are found at the roots of grass, beneath bark, in fungi, flowers, and but rarely, if ever, in putrid animal substances.

It is perhaps needless to observe, that in uniting the various Latreilleian groups of Nitidulariæ, Ipsides, Xylophagi, and Erotylenæ, or portions thereof, under the term Engidæ, I have in some degree followed the views hastily sketched out by Mr. Mac Leay, in the *Annulosa Javanica*, assisted by the natural habit of the species, rather than by an analytical examination of all the genera, which although unquestionably the most satisfactory method of procedure, cannot at all times be resorted to, from the impracticability of obtaining the requisite specimens for dissection, &c. from their great rarity.

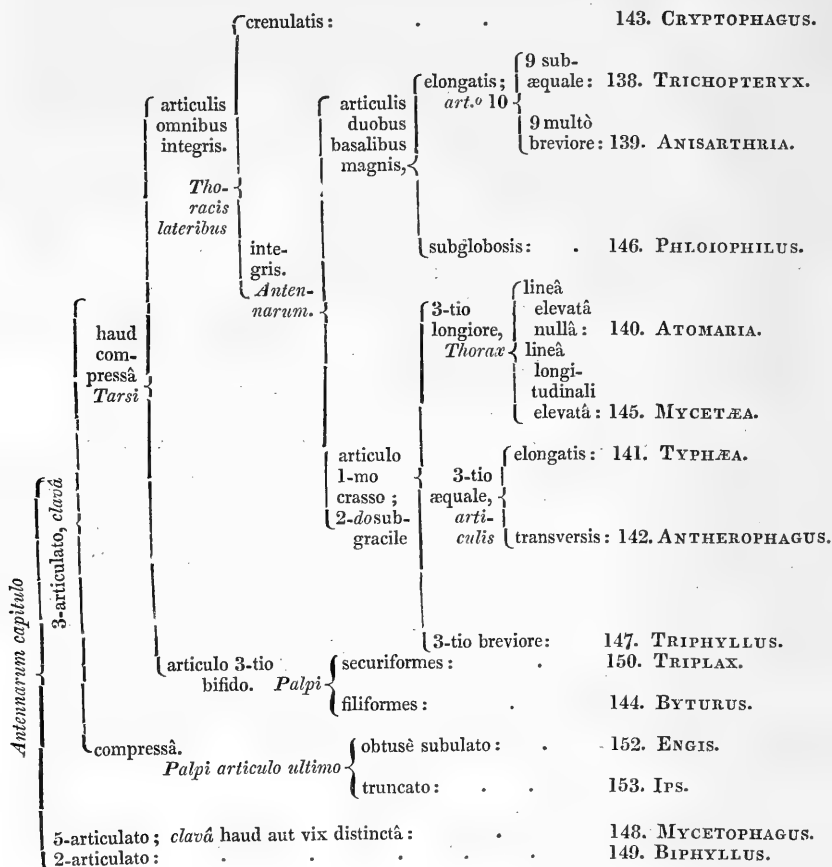
The following artificial tabular view may serve to discriminate the reputed indigenous genera.

A. *Tarsi* quatuor antichi articulis quinque; postici articulis quatuor\*.

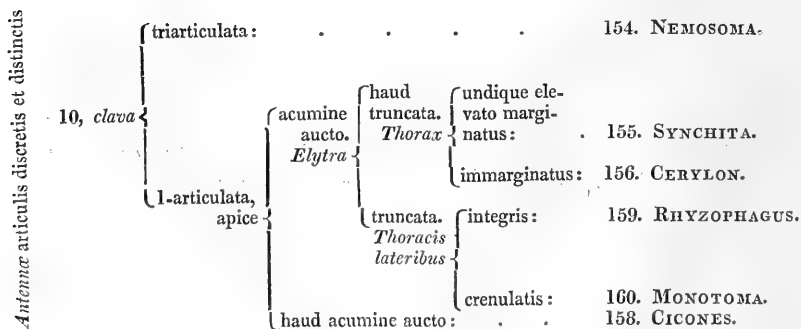
*Antennarum capitulo* 4-articulato: 151. TETRATOMA.

\* One sex of the Cryptophagi, and of some of the kindred genera, has four joints only to the posterior tarsi; and the males of the Mycetophagi three joints only to the anterior ones; in *Rhyzophagus*, the four anterior tarsi appear five-jointed:—other anomalies likewise occur; the insects of the second division of *Cryptophagus* having the third joint of the tarsi bilobed, &c.

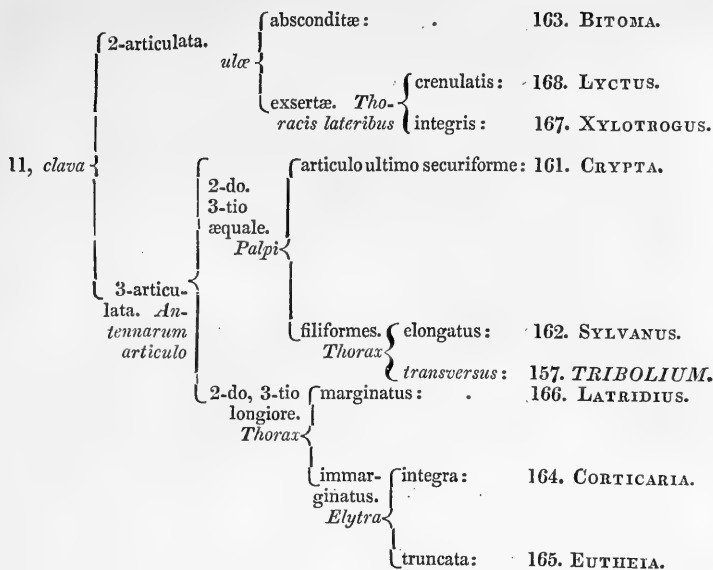
B. *Tarsi* omnes plerumque articulis quinque; articulo 4-to sæpè minuto, aut ferè obsoleto.



C. *Tarsi* omnes plerumque articulis quatuor.



*Antennæ articulis discretis et distinctis*



GENUS CXXXVIII.—TRICHOPTERYX, *Kirby*.

*Antennæ* about half as long as the body, the two basal joints large, robust, cylindric, the six following very slender, filiform, the articulations of nearly equal length, the three last stouter, forming an elongate nodose club, and furnished with long hairs. *Palpi* filiform, minute: *head* convex, large, triangular: *thorax* large, broad, convex, the sides rounded and somewhat dilated: *scutellum* large, triangular: *body* slightly convex; the *breast* on each side with a broad quadrate laminated process: *wings* with the apex produced into several bundles of hairs, or capillaceous: *elytra* rather broad, slightly truncate at the apex.

The singularly fasciculated capillaceous wings of this curious genus at once point out its difference from the kindred minute genera of *Anisarthria* and *Atomaria*; insects in general of such atomical dimensions that it is nearly impossible to give an adequate idea of their distinctions, though to an experienced eye they may appear to differ considerably: and in the present state of our knowledge of such minute genera the attempt “to unite each sex to its legitimate partner” is in many cases impossible, neither can we always “with certainty distinguish the species from the variety;” it is therefore not without considerable hesitation that I venture to separate the following apparent species in this and the two succeeding genera.

Sp. 1. *atomaria*. *Nigro-fusca, tenuè pubescens, punctulata, antennis pedibusque pallidè rufis*. (Long. corp.  $\frac{1}{2}$  lin.)

De. *atomaria*. *De Geer*.—Tr. *atomaria*. *Steph. Catal.* 83. No. 883.

Deep black-brown, very delicately pubescent, and finely punctured: head black, acuminate anteriorly: thorax thickly punctulated, large, convex, with the lateral margins rounded and the hinder angles somewhat produced: scutellum large: elytra broad, slightly convex, with the apex obtuse, somewhat obliquely truncate: body pitchy-black: legs and antennæ pale rufous, the latter dusky towards the apex.

Not uncommon throughout the metropolitan district, frequenting damp hedges, gardens, &c., under dung-heaps, rotten garden stuff, or in gravel and sand pits, during the summer. "Taken in the garden at the Willows (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 2. *minima*. *Nigra, nitida, elytris apicè pallidis, pedibus rufis*. (Long. corp.  $\frac{1}{3}$  lin.)

De. *minimus*. *Marsham*.—Tr. *minima*. *Steph. Catal.* 83. No. 884.

Depressed, head and thorax deep glossy black, obscurely punctured; the elytra rather paler, with the apex still more diluted; antennæ ferruginous; legs pale rufous.

Differs from the foregoing in being smaller, of a deeper and glossy black, with the apex of the elytra pale, and from the following by the latter characters:—from Tr. *minuta* it differs in being larger, of a deeper hue, and in being more depressed.

Found near London, extremely minute.

Sp. 3. *pusilla*. *Nigra, nitida, antennis pedibusque pallidis*. (Long. corp.  $\frac{1}{3}$  lin.)

Sc. *pusillum*. *Gyllenhal?*—Tr. *pusilla*. *Steph. Catal.* 83. No. 885.

Rather convex, deep glossy black, very finely punctured, the elytra concolorous to the apex: antennæ and legs very pale testaceous.

The size of the foregoing, from which it chiefly differs in having the apex of the elytra concolorous with the base, with the antennæ and legs very pale.

Taken near London and in other parts, not uncommon.

Sp. 4. *nana*. *Brevis, ovata, nigro-picca, punctulata, tenuè pubescens, antennis nigro-piccis, pedibus pallidis*. (Long. corp.  $\frac{1}{8}$  lin.)

Tr. *nana*. *Steph. Catal.* 83. No. 886.

Very short, ovate, pitchy-black, punctulate, and slightly pubescent, the elytra concolorous at the apex, antennæ pitchy-black, the legs pale.

The deep pitchy-black antennæ of this minute insect, with its short ovate form, well discriminate it from its congeners.



The most minute Coleopterous insect with which I am acquainted, scarcely exceeding in dimensions the period which closes this sentence: it is found near London, but apparently not very common.

Sp. 5. minuta. *Oblongo-ovata, nigro picea, elytris apicè dilutioribus, antennis pedibusque pallidè rufis.* (Long. corp.  $\frac{1}{8}$  lin.)

Tr. minuta. *Steph. Catal.* 83. No. 887.

Oblong-ovate, pitchy-black, slightly pubescent, and finely punctured, the elytra paler at the apex, the antennæ and legs pale rufescent.

More oblong and somewhat larger than the preceding, from which it also differs in having the antennæ and legs pale rufescent, and the apex of the elytra rather pitchy.

Slightly larger than the foregoing, but yet truly atomical;—it occurs near London.

Sp. 6. trisulcata. *Piceo-nigra, thorace obsoletissimè trisulcato, pedibus pallidis.* (Long. corp.  $\frac{1}{8}$  lin.)

Tr. trisulcata. *Spence MS.?*—*Steph. Catal.* 83. No. 888.

Minute, oblong-ovate, deep pitchy-black, punctulate, the thorax with three very obscure sulci; the legs pale, the antennæ deep black.

Like Tr. nana this species has the antennæ black, but it is of a more oblong form, and has the thorax very obscurely trisulcate.

Also a most minute insect, appearing but as a mere speck upon paper; found near London, in Yorkshire, and I believe likewise in Norfolk.

## GENUS CXXXIX.—ANISARTHRIA\*, *Waterhouse.*

*Antennæ* very pilose, rather longer than the thorax, the basal joint stout, elongate, slightly bent, the second rather stout, the six following very slender subclavate, the ninth large obconic, the following minute subquadrate, the terminal one large ovate. *Palpi* small, the terminal joint ovate, subacute: *head* broad, slightly emarginate anteriorly: *thorax* suborbicular, truncate posteriorly: *scutellum* minute: *body* convex: *elytra* entire, broad, dilated laterally.

Amongst the species of this, the preceding, and the following genera are some of the most minute coleopterous insects, their atom forms scarcely exceeding, as remarked by Kirby and Spence, the bulk of an ordinary period: “but,” as Latreille observes, “to the

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\* *Ανισος* inæqualis, *Ἀρθρον* articulus.

eye of the naturalist the mass or volume of an object is a matter of little consequence. The wisdom of the CREATOR never appears with more effect than in the structure of those minute beings, which seem to conceal themselves from observation; and Almighty Power is never more strikingly exhibited than in the concentration of organs in such an atom. In giving life to this atom, and constructing in dimensions so minute so many organs susceptible of different sensations, my admiration of the SUPREME INTELLIGENCE is much more heightened than by the contemplation of the structure of the most gigantic animals." And unenvied must be the mind of him who can contemplate such wonders, and reflect upon the prodigious numbers of created beings which enliven the face of the globe, at least a quarter of a million distinct species, each of which is endowed with its own peculiar instincts, feelings, and propensities, without being excited to meditate upon their FIRST GREAT CAUSE!

From Trichopteryx, and in fact from all the remaining genera of this family, the minute tenth joint of the antennæ, the central one of the club, at once separates it, exclusively of its other characters: the species are all exceedingly minute, and appear to be unknown to the continental entomologists.

Sp. 1. punctula. *Suboblongo-ovata, nigra nitida, subpubescens, obsoletissime punctulata, antennis pedibusque pallidis.* (Long. corp.  $\frac{1}{4}$  lin.)

At. punctula. *Steph. Catal.* 83. No. 889.

Somewhat elongate-ovate, shining black, slightly pubescent, and very obsoletely punctulate; with the antennæ and legs very pale.

The very minute size of this species, coupled with its deep glossy colours and pale legs, distinguish it from its congeners; the following is the only one resembling it in bulk; but that insect is of a paler hue above and smaller.

Taken near London, and I believe in Cambridgeshire.

Sp. 2. minutissima. *Ovata, nigro-fusca, tenuè pubescens, punctulata, elytris dilutioribus, antennis pedibusque ochraceo-pallidis.* (Long. corp.  $\frac{1}{8}$  lin.)

At. minutissima. *Kirby MS.—Steph. Catal.* 83. No. 890.

Rather less than the preceding: ovate, fuscous-black, very slightly pubescent, the elytra rather paler or reddish-brown.

Differs from the foregoing in its more ovate form, paler hue, and smaller size.

Found near London, in Norfolk, Bristol, &c.

Sp. 3. perpusilla. *Suboblongo-ovata, atra, nitida, elytris posticè piceis, antennis testaceis, pedibus piceis.* (Long. corp.  $\frac{1}{3}$  lin.)

De. perpusilla. *Marsham.—At. perpusilla.* *Steph. Catal.* 83. No. 891.

Somewhat oblong-ovate, deep glossy black, very obscurely punctured, and absolutely pubescent; thorax very convex anteriorly and considerably dilated; elytra less convex, piceous posteriorly; antennæ testaceous; legs pale.

From the foregoing this differs in being more convex, of a deep glossy black, with the apex of the elytra above piceous, the antennæ luteous, and the size larger.

Inhabits the metropolitan district and Norfolk. "In the neighbourhood of Swansea."—*L. W. Dillwyn, Esq.*

Sp. 4. *Melas. Oblongo-ovata, nigra nitida, antennis pedibusque testaceis.* (Long. corp.  $\frac{1}{8}$ — $\frac{1}{4}$  lin.)

De. *Melas. Marsham.*—At. *Melas. Steph. Catal. 83. No. 892.*

Oblong-ovate, slightly convex, deep shining black, obscurely punctured, somewhat pubescent, the elytra concolorous at the apex: antennæ and legs testaceous.

More oblong in form, and less convex than *An. perpusilla*, of an uniform colour above, and with the legs as well as the antennæ testaceous.

Not uncommon in the metropolitan district. "Near Swansea, in dung."—*L. W. Dillwyn, Esq.*

Sp. 5. *nitida. Brevis, ovata, nigra nitidissima, antennis pedibusque pallide testaceis.* (Long. corp. vix  $\frac{1}{4}$  lin.)

At. *nitida. Steph. Catal. 83. No. 893.*

Short, ovate, slightly convex, very glossy black, with the apex of the elytra concolorous; the antennæ and legs pale testaceous.

The short ovate form, and the slight convexity of the insect, combined with its very glossy surface, are its chief characters.

Found in Norfolk, and occasionally near London.

Sp. 6. *pilosella. Ovata, castanea, nitida, pilosa, capite atro, antennis pedibusque ferrugineis.* (Long. corp.  $\frac{1}{2}$  lin.)

De. *pilosellus. Marsham.*—At. *pilosella. Steph. Catal. 84. No. 894.*

Ovate, castaneous, shining, with the head dusky or deep black; the thorax and elytra pilose; the body beneath, legs, and antennæ ferruginous.

This species differs slightly from the others of the genus by having the sides of the thorax less dilated, and the elytra somewhat attenuated towards the apex;—from all the foregoing it may be known by its castaneous hue, and black head, exclusively of its dissimilarity in form.

Found occasionally near London; the pair I obtained from the Marshamian cabinet were taken in a rotten alder.

Sp. 7. *nitidula. Ovata, convexa, nigro-picea, pubescens, antennis pedibusque rufis.* (Long. corp.  $\frac{1}{3}$  lin.)

De. *nitidula. Marsham.*—At. *nitidula. Steph. Catal. 84. No. 895.*

Ovate, convex, pitchy-black, pubescent, shining, the elytra paler at the apex, the body beneath, legs, and antennæ rufous.

Like the foregoing species this wants the dilated sides to the thorax; the insect is however smaller, and apparently broader behind:—it may be the opposite sex.

A pair in my collection from the Marshamian cabinet.

Sp. 8. *brunnea*. *Oblonga, brunnea nitida, antennis pedibusque testaceis, capite nigro.* (Long. corp.  $\frac{1}{2}$  lin.)

De. *brunneus*. *Marsham.*—*At. brunnea*. *Steph. Catal.* 84. No. 896.

Oblong, slightly pubescent, reddish-brown, shining, the head black, the antennæ and legs testaceous.

Also with the margins of the thorax scarcely dilated; but the insect is rather larger, of a more oblong form, and more rufescent in colour, with the body less pubescent and less convex.

From the Marshamian cabinet.

## GENUS CXL.—ATOMARIA, Kirby.

*Antennæ* as long as the thorax, with the three last joints forming an elongate club, the basal joint robust, slightly curved, the second more slender and longer than the third, which is slightly clavate, and longer than the fourth; the latter, sixth, and eighth, equal; the fifth about as long as the third; the seventh short, subglobose, resembling the fifth; the remainder forming the club, which is obtuse at the apex. *Palpi* short, obtusely subulated: *head* rather broad, triangular; *eyes* slightly prominent: *thorax* convex, margined, depressed behind: *scutellum* small: *elytra* convex, entire: *body* ovate-linear.

*Atomaria* differs from the two preceding genera in the structure of the antennæ; the second joint being small; the fourth, sixth, and eighth shorter than the intermediate ones, and the club formed of three larger subequal joints, and not clothed with elongate hairs: from *Cryptophagus* it differs also by having the margins of the thorax entire.

### A. With the antennæ somewhat remote at the base.

Sp. 1. *fulvicollis*. *Oblongo-ovata, castanea nitida, tenuè pubescens, thorace fulvo, antennis pedibusque rufo-fulvis.* (Long. corp.  $\frac{1}{2}$  lin.)

*At. fulvicollis*. *Steph. Catal.* 84. No. 897.

Oblong-ovate, slightly convex, shining castaneous, slightly pubescent, with the thorax fulvous, the eyes dusky, the antennæ and legs rufo-fulvous.

The smallest species of this genus, except the following, which it somewhat

resembles, but differs in its broader, more convex, and ovate form, and the dissimilarity of its colouring.

Taken at Dover;—near Bristol, in Norfolk, &c.

Sp. 2. *thoracica*. *Elongata, subgracile, rufo-castanea, nitida, thorace pallidior, antennis pedibusque fulvo-castaneis.* (Long. corp.  $\frac{1}{2}$  lin.)

At. *thoracica*. *Steph. Catal.* 84. No. 898.

Rather slender, elongate-linear, slightly depressed, glossy reddish-chestnut, with the thorax paler, the antennæ and legs fulvo-castaneous.

Smaller than the preceding insect, from which it may be known by its elongate depressed form, and by its paler but more brilliant hue:—it may be the opposite sex.

Taken near London; not uncommon in gardens at Ripley in June.

Sp. 3. *evanescens*. *Oblonga, piceo-nigra, nitida, elytris apice piceis, antennis pedibusque pallide ferrugineis.* (Long. corp.  $\frac{1}{2}$  lin.)

Si. *evanescens*. *Marsham*.—At. *evanescens*. *Steph. Catal.* 84. No. 899.

Oblong pitchy-black, shining, with the elytra paler at the apex, the antennæ and legs pale-ferruginous.

About the size of the last, from which it is distinguished by its darker hue and pale-ferruginous antennæ and legs, exclusively of its slight dissimilarity in form.

Found near London, and in Norfolk and Suffolk.

Sp. 4. *phæogaster*. *Oblongo-ovata, rufa nitida, elytris anticè abdomineque fuscis, oculis nigris.* (Long. corp.  $\frac{1}{3}$ — $\frac{1}{2}$  lin.)

Si. *phæogaster*. *Marsham*.—At. *phæogaster*. *Steph. Catal.* 84. No. 900.

Oblong-ovate, shining rufous, with the eyes black, the base of the elytra and the abdomen fuscous, the latter glabrous and shining; legs rufous; antennæ testaceous.

The fuscous base of the elytra, and abdomen, with the black eyes, and more ovate form of this insect, are its chief points of distinction from its congeners.

Not uncommon in Battersea-fields, and in other places near London.

Sp. 5. *basella*. *Elongata, subdepressa, rufo-testacea, nitida, elytris basi fusconigris.* (Long. corp.  $\frac{1}{2}$  lin.)

At. *basella*. *Kirby MSS.*—*Steph. Catal.* 84. No. 901.

Elongate, slightly depressed, of a shining testaceous-red, with the base of the elytra fuscous-black, the antennæ and legs rufescent.

More elongate than the preceding insect, from which it differs in being of a

brighter hue, with the base of the elytra of a deeper black, and the abdomen rufous.

Found in Suffolk, near Barham, by the Rev. W. Kirby:—I possess specimens which I believe were captured near London.

Sp. 6. *atricapilla*. *Oblongo-ovata, pallidè rufo-testacea, capite fusco aut nigro, antennis pedibusque pallidè testaceis.* (Long. corp.  $\frac{1}{2}$  lin.)

At. *atricapilla*. Kirby MSS.—*Steph. Catal.* 84. No. 902.

Oblong-ovate, of a pale shining testaceous-red, with the head fuscous or black, the antennæ and legs pale testaceous; the scutellum chestnut.

The pale testaceous colour and dark head sufficiently characterize this minute insect.

Not uncommon in the metropolitan district; also found in other parts, as Norfolk, Suffolk, Salop, &c.

Sp. 7. *hirta*. *Oblongo-ovata, convexa, rufo-ferruginea, hirsuta, pedibus pallidioribus.* (Long. corp. 1 lin.)

Si. *hirta*. Marsham.—At. *hirta*. *Steph. Catal.* 84. No. 903.

Oblong-ovate, convex, rufo-ferruginous, pilose, the elytra deeply punctured; the antennæ and legs pale ferruginous.

Larger than any of the foregoing, from all of which it also differs in being more convex and shorter, more pilose, and the elytra being somewhat deeply, though distantly, punctate.

Common throughout the metropolitan district: also found in Norfolk, Suffolk, Devonshire, &c. “Netley.”—*Rev. F. W. Hope*. “On the flowers of *Heraclium Spondylium* (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 8. *testacea*. *Elongata, rufo-testacea, glabra, thorace pallidiore, striâ posticâ punctatâ.* (Long. corp.  $\frac{3}{4}$  lin.)

At. *testacea*. Kirby MSS.—*Steph. Catal.* 84. No. 904.

Elongate, rufo-testaceous, glabrous, with the thorax paler, with an impressed punctate stria behind, eyes fuscous.

Smaller than the last, from which it is distinguished by its more elongate form, paler colour, glabrous impunctate elytra, and by the punctured stria on the hinder margin of the thorax.

Found in Suffolk.

Sp. 9. *castanea*. *Oblongo-ovata, convexa, castanea glabra, antennis pedibusque pallidioribus.* (Long. corp.  $\frac{3}{4}$  lin.)

At. *castanea*. Kirby MSS.—*Steph. Catal.* 84. No. 905.

Oblong-ovate, castaneous, shining, glabrous, the antennæ and legs paler: eyes fuscous.

The glossy castaneous hue of this species, with its oblong-ovate, and convex form, distinguish it from its congeners.

Not uncommon near London; also found in Norfolk, Suffolk, Devonshire, &c.

Sp. 10. *nigripennis*. *Ovata, convexa, rufo-testacea, nitida, glabra, elytris punctatis nigris, abdomine rufo-piceo.* (Long. corp. 1 lin.)

De. *nigripennis*. *Paykul.*—At. *nigripennis*. *Steph. Catal.* 84. No. 906.

Ovate, convex, shining rufo-testaceous, glabrous, the elytra punctate and black, the abdomen pitchy-red; legs and antennæ ferruginous.

The deep-black elytra and bright rufo-testaceous thorax serve at once to distinguish this pretty species.

Not common: taken occasionally within the metropolitan district, and in Norfolk and Suffolk.

Sp. 11. *mesomelas*. *Ovata, convexa, nigra, pubescens, elytris testaceis basi determinatè nigris, antennarum basi pedibusque rufo-testaceis.* (Long. corp.  $\frac{3}{4}$  lin.)

De. *mesomelas*. *Herbst.*—At. *mesomelas*. *Steph. Catal.* 84. No. 907.

Ovate convex, black, pubescent, the elytra testaceous, with the base distinctly black for about one-third of their length; the antennæ and legs pale rufo-testaceous, the club of the former dusky.

Slightly variable: in some examples the anterior margin of the thorax is rufescent; others have the black at the base of the elytra extending considerably towards the apex, and the latter is sometimes fuscous.

This and the following differ from their congeners in having the elytra more or less testaceous, or yellow, at the apex, the base being black; and the capitulum of the antennæ dusky.

Found in damp situations near London: not very common.

Sp. 12. *dimidiata*. *Oblongo-ovata, subconvexa, punctulatissima, nigro-fusca, elytris dimidiato-flavis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

Co. *dimidiata*. *Marshall.*—At. *dimidiata*. *Steph. Catal.* 84. No. 908.

Oblong-ovate, slightly convex, very thickly punctured, of a deep fuscous-black, with the apical half of the elytra yellow, or ochraceous: legs testaceous; antennæ with the club fuscous.

More elongate than the foregoing, of which I suspect it may be only a variety, or the opposite sex:—it is in general rather larger.

Inhabits the metropolitan district. I have also obtained it from the neighbourhood of Bristol.

Sp. 13. *atra*. *Ovata, convexa, nigra, pubescens, elytrorum apice antennæ pedibusque rufo-ferrugineis, thorace postice latiore.* (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

De. *ater*. *Herbst.*—At. *atra*. *Steph. Catal.* 84. No. 909.

Ovate, convex, black, pubescent, with the elytra rufo-ferruginous at the apex, the latter rather acute, the base broad, the middle dilated: the thorax broad behind, the anterior angles greatly deflexed: antennæ and legs rufo-ferruginous; the latter darkest: body piceous beneath.

Differs from the foregoing by its more convex form, and from the following by its rufous antennæ.

Not uncommon in the metropolitan district, at the roots of grass, &c., in damp meadows and fields.

Sp. 14. *carbonaria*. *Subovata, convexa, atra nitida, subpubescens, antennis pedibusque fuscis*. (Long. corp.  $\frac{2}{3}$  lin.)

At. *carbonaria*. Kirby MSS. ?—Steph. Catal. 84. No. 910.

Subovate, convex, deep glossy-black, slightly pubescent; the elytra very thickly and finely punctulate, the apex rather acute and fuscous: antennæ and legs deep fuscous.

The deep fuscous, or nearly black antennæ of this insect distinguish it from all its congeners excepting the following, of which it may be the opposite sex, differing in being of a less oblong form and more convex.

Found in Norfolk and near London, but not common.

Sp. 15. *fuscipes*. *Oblongo-ovata, nigra, pubescens, antennis pedibusque concoloribus*. (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

Cr. *fuscipes*. Gyllenhal.—At. *fuscipes*. Steph. Catal. 85. No. 914.

Oblong-ovate, black, pubescent, finely punctured; thorax very convex, broadly margined behind; elytra also deep black, dilated in the middle, slightly acute at the apex; the antennæ rather stout, deep black: legs also black.

The black antennæ and legs of this insect at once distinguish it from all but the preceding species, from which it differs in being rather more elongate and less convex.

Not common: found at the roots of grass in Battersea-fields.

Sp. 16. *rufipes*. *Oblongo-ovata, piceo-nigra, subpubescens, antennis pedibusque rufo-ferrugineis*. (Long. corp.  $\frac{1}{2}$  lin.)

At. *rufipes*. Steph. Catal. 84. No. 911.

Oblong-ovate, rather depressed, pitchy-black, very slightly pubescent; the elytra a little dilated in the middle, and somewhat fulvescent at the apex: the antennæ and legs bright rufo-ferruginous.

Of a more elongate form than the following, from which it also differs in being of a darker colour, with the apex of the elytra rather fulvescent.

Taken near London; in Norfolk, Devonshire, &c.

Sp. 17. *ruficornis*. *Oblongo-ovata, subconvexa, nigra nitida, thorace fusco, antennis pedibusque rufo-ferrugineis*. (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

Si. *ruficornis*. Marsham.—At. *ruficornis*. Steph. Catal. 85. No. 912.



Oblong-ovate, slightly convex, glossy-black, with the thorax fuscous, the antennæ and legs rufo-ferruginous.

From the preceding this differs in having the thorax fuscous and the apex of the elytra concolourous with the base, and the body somewhat convex.

Inhabits the metropolitan district, as well as the counties of Suffolk and Norfolk.

Sp. 18. *dorsalis*. *Brevis ovata, subconvexa, picea, antennis pedibusque rufo-ferrugineis, elytrorum dorso nigro.* (Long. corp.  $\frac{1}{2}$  lin.)

At. *dorsalis*. *Kirby MSS.—Steph. Catal. 85. No. 913.*

Short, ovate, slightly convex, piceous, with the antennæ and legs rufo-ferruginous; the base of the elytra on the back black.

The deep black dorsal patch at the base of the elytra, combined with the short slightly convex form of the insect, and pale pitchy colour, at once distinguish this species from its congeners.

Inhabits the neighbourhood of London, and the vicinity of Ipswich.

#### B. Antennæ approximating at the base\*.

Sp. 19. *nigrirostris*. *Oblonga, rufo-picea, capite nigro, antennis pedibusque rufo-ferrugineis.* (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

At. *nigrirostris*. *Kirby MSS.—Steph. Catal. 85. No. 915.*

Oblong, depressed, pitchy-red, with the head black, the antennæ and legs rufo-ferruginous.

This species differs from the following by having the head alone black, and from At. *linearis* by being less linear, and of a pitchy-red colour.

Not uncommon in the neighbourhood of the metropolis; found also in other parts of the country. “Roots of grass, Battersea-fields.”—*Mr. Ings*.

Sp. 20. *nigriventris*. *Oblonga, testacea, thorace abdomineque nigro-fuscis, antennis pedibusque fulvis.* (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

At. *nigriventris*. *Kirby MSS.—Steph. Catal. 85. No. 916.*

Oblong, slightly depressed, testaceous, with the thorax and abdomen fuscous-black: the antennæ and legs fulvous, or rufo-testaceous.

The deep fuscous thorax of this species, and testaceous head, distinguish it from

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\* Although some of the species of the preceding section have the antennæ somewhat approximating at the base, they are, compared with those of this section, remote; the contour of the insects of the two sections is widely different: those of the present being more or less linear, and but slightly convex, thereby approaching in form to the Typhææ.

*At. nigrirostris*, and its testaceous hue from *At. linearis*, the only two species of the genus with which it can be confounded.

Found in Suffolk, and occasionally in the metropolitan district : not common.

Sp. 21. *linearis*. *Elongata, depressa, nigra pubescens, antennis pedibusque castaneis*. (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

*At. linearis*. *Steph. Catal.* 85. No. 917.

Elongate, depressed, slightly pubescent, black, the antennæ and legs castaneous. The linear and very elongate form of this species, combined with its black hue, sufficiently characterize this species.

Not uncommon in the metropolitan district.

## GENUS CXLI.—*TYPHÆA*, Kirby.

*Antennæ* somewhat remote at the base, slender, the basal joint rather stout, subglobose; the second smaller, subcylindric, as long as the third, both elongate; fourth short, subglobose: fifth elongate, clavate; three following short, subglobose; the remainder forming the club, each joint large, the two first somewhat globose, truncate, the last larger ovate, obtuse. *Palpi* short, subfiliform, the terminal joint elongate ovate, subacute: *head* subtriangular; *eyes* globose: *thorax* transverse, the lateral margins entire: *scutellum* small, triangular: *body* elongate, more or less depressed: *elytra* elongate, sublinear: *tarsi* simple, five-jointed; the posterior pair in one sex four-jointed only.

There is considerable resemblance in form between the insects of this genus and of the last section of the preceding, but they may readily be distinguished by the difference in the structure of their antennæ, which have the basal joint alone incrassated; the second rather slender, subcylindric, and equal in length with the third, which is elongate, clavate; the capitulum somewhat larger, and the joints not alternately longer and shorter.

Sp. 1. *Sparganii*. *Oblongo-ovata, ferrugineo-ochracea, subpubescens, elytrorum basi margine suturâque fusco-nigris*. (Long. corp.  $1\frac{1}{4}$  lin.)

*Cr. Sparganii*. *Leach MSS.*—*At. Sparganii*. *Steph. Catal.* 85. No. 918.

Oblong-ovate, rusty-ochraceous, slightly pubescent; head obscurely punctate: thorax subquadrate, rather convex anteriorly, rufescent: elytra somewhat deeply punctate, broader than the thorax at the base, the margins slightly dilated, the shoulders with an elevated tubercle: the base, region of the scutellum, suture, and margin of a fuscous-black: antennæ and legs ochraceous: abdomen pitchy-red.

Known from the other species of the genus by having the margins of the elytra, the suture, and the base fuscous or black, with the abdomen pitchy-red.

Not common; but found in the metropolitan district. “On *Sparganium erectum*, at Cobham.”—*Dr. Leach*.

Sp. 2. ferruginea. *Oblongo-ovata, subconvexa, ferruginea, tenuè pubescens, thorace elytrisq̃ punctulatissimis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Si. ferruginea. *Marsham*.—Ty. ferruginea. *Steph. Catal.* 85. No. 919.

Oblong-ovate, rather convex, entirely ferruginous, and very slightly pubescent, with the thorax and elytra thickly punctulated; the antennæ and legs rather pale.

Some examples are of a castaneous hue, with the base of the elytra paler.

The absence of the dark border to the elytra serves to discriminate this insect from the foregoing; and its more convex and simple elytra, from the following.

Found in fungi and beneath bark throughout the metropolitan district:—taken also near Bristol. “Netley, Gloucestershire, and North Wales.”—*Rev. F. W. Hope*.

Sp. 3. testacea. *Oblonga, sub-depressa, ferruginea, tomentosa, oculis nigris, elytris obsolete striatis interstitiis rugulosis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Ty. testacea. *Steph. Catal.* 85. No. 920.: vix Mycet. testaceus. *Fabricii*.

Oblong, slightly depressed, ferruginous, clothed with a pale down, the eyes black: head sparingly punctate; thorax the same, slightly convex, with a minute impression at the base on each side: elytra very little convex, most obsoletely striated, the interstices a little transversely rugose: body beneath, antennæ, and legs, pale ferruginous.

From the preceding, this insect—which is probably the true *Dermestes fumatus* of Linné—(See remarks under *Mycetæa fumata*)—differs in having the elytra obscurely punctate-striate, as well as in colour and form.

Not uncommon in various parts of the metropolitan district; frequenting flowers, rotten wood, fungi, &c.

Sp. 4. tomentosa. *Oblonga, depressa, rufo-testacea, tomentosa, oculis nigris, elytris obsoletissime striatis.* (Long. corp. 1 lin.)

Bo. tomentosa. *Marsham MSS.*—Ty. tomentosa. *Steph. Catal.* 85. No. 921.

Rather less than the last: oblong, depressed, of a bright, but pale reddish-testaceous: tomentose, with the eyes black; the elytra very obscurely striated, the interstices not rugulose.

More depressed and smaller than the foregoing; of a paler colour, and the elytra less distinctly striated:—probably the opposite sex.

Found near London, and in Yorkshire.

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GENUS CXLII.—ANTHEROPHAGUS, *Megerle*.

*Antennæ* scarcely the length of the thorax, rather stout, the basal joint large, subglobose; the second to the eighth short, transverse, coarctate, of nearly equal length and size, considerably more slender than the basal one or the club, which latter is composed of three large joints, the two first of which are cup-shaped, the apical ovate, acute. *Palpi* filiform, with the terminal joint obtusely subululated: *head* suborbicular; *eyes* small, globose: *thorax* with the lateral margins entire; *body* oblong-ovate, slightly convex: *elytra* ovate, entire: *legs* moderate; *tibiæ* slender at the base; *tarsi* simple, five-jointed; the posterior in one sex quadriarticulate.

The short transverse coarctate articulations of the antennæ, the second to the eighth being of nearly equal length, form, and bulk, at once point out the distinction of this genus from the preceding, as the entire lateral margins to the thorax do from *Cryptophagus*:—the species are most commonly found upon flowers, whence the name of the genus.\*

Sp. 1. pallens. *Ferrugineus subpubescens, thorace transverso rectangulo convexiore, capiteque profundius punctatis.* (Long. corp. 2—2½ lin.)

Te. pallens. *Linné. Martyn C. pl.* 39. f. 3.—An. pallens. *Steph. Catal.* 86. No. 936.

Ferruginous, somewhat pubescent: head rather coarsely punctate: thorax transverse rectangular, rather convex and deeply punctate: elytra rather paler than the thorax: body beneath deep ferruginous: legs rather pale testaceous, with the base of the tibiæ fuscous. The opposite sex has the antennæ shorter and black, with the base and apex pale, the tibiæ black, and the base and the posterior tarsi quadriarticulate.

This species differs from the following in having the head and thorax more deeply punctured, and the disc of the latter more convex:—the insect is also somewhat less.

Not common: found occasionally on umbelliferous flowers throughout the metropolitan district:—in a lane at the back of Caen-wood, Hampstead, and at Ripley, I have frequently taken it. “On the

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\* *Silpha castanea* Marsham, erroneously placed in this genus by Mr. Curtis, by copying Gyllenhal's synonyms, is a true *Triplax*, according to the original specimen contained in the Marshamian collection:—*Vide* *Triplax castanea*, subtus.

flowers of umbelliferous plants, and occasionally under logs of wood on the sea-shore (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 2. *silaceus*. *Flavo-testaceus, subpubescens, elytris abdomineque saturatioribus, thorace transverso rectangulo.* (Long. corp.  $2\frac{1}{4}$ —3 lin.)

*Ips. silaceus.* *Herbst.*—An. *Silaceus.* *Steph. Catal.* 86. No. 937.

Testaceous-yellow, slightly pubescent: head rather porrect, rounded anteriorly, very finely punctured; eyes black; thorax transverse, rectangular, slightly convex, faintly punctulate, pale ochraceous: elytra very obscurely punctulate, deep testaceous, with a single obsolete abbreviated stria near the suture: body beneath glossy ferruginous, punctate: legs pale yellow, with the base of the tibiæ rather obscure. The opposite sex has the intermediate joints of the antennæ of dusky-brown, the base and apex being pale; the base of the tibiæ black, and the tarsi quadriarticulate.

Larger, with the head and thorax less distinctly punctate and of a paler hue than the preceding species.

Less abundant than the last, like which it frequents flowers in various places throughout the metropolitan district.

Sp. 3. *glaber?* *Rufo-testaceus, glaber, subdepressus, thorace transverso, anticæ sub-emarginato.* (Long. corp.  $1\frac{1}{2}$  lin.)

*Cr. glaber.* *Gyllenhal?*—An. *glaber.* *Steph. Catal.* 86. No. 938.

Rufo-testaceous, glabrous, slightly depressed: head smooth rufo-ferruginous; eyes black: thorax somewhat emarginate anteriorly, truncate posteriorly, the lateral margins rounded and slightly waved, the disc convex, smooth, glossy rufo-ferruginous: elytra moderately convex, impunctate.

Differs from its congeners by having the surface glabrous, and scarcely punctured; and the anterior margin of the thorax somewhat emarginate.

Whether this be the An. *similis* or *castanea* of Curtis, or what those species are, I am not aware.

Rare: found within the metropolitan district.

## GENUS CXLIII.—CRYPTOPHAGUS, *Herbst.*

*Antennæ* somewhat approximating, stout, as long as the thorax; the basal joint large, globose; second smaller, also globose; third longer than either of the others, clavate; the five following smaller than the second, subglobose; the remaining three forming the club, the two first joints of which are cup-shaped, the third conical. *Palpi* short, filiform; the terminal joint elongate, ovate: *head* trigonate, inserted up to the *eyes*, which are small: *thorax* transverse, truncate behind, the lateral margins more or less dentate or crenate: *scutellum* broad, short, transverse: *body* ovate, convex: *elytra* elongate-ovate: *tarsi* simple, five-jointed, the posterior pair in one sex four-jointed only.

The insects of this genus may be known from those of the preceding genera of this family, by having the lateral margins of the thorax more or less denticulated, and by the slightly different structure of the antennæ.

A. With the lateral margins of the thorax rather strongly denticulated.

Sp. 1. Populi. *Oblongo-ovatus, fusco-ferrugineus, pubescens, elytrorum disco nigricante, thoracis lateribus obtusè bidentatis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Cr. Populi. *Paykul.*—Curtis, iv. pl. 160.—Steph. Catal. 85. No. 922.

Oblong-ovate, ferruginous-brown, thickly punctate, pubescent; head porrect, rather deeply punctate: eyes globose, black: thorax truncate anteriorly and posteriorly, the disc convex, much punctured and pubescent; the lateral margins with a minute denticulation; the anterior angles and base slightly produced, the hinder angle being very acute: elytra ovate, piceous, minutely punctured, the margin ferruginous or pale castaneous, pubescence ochraceous: body beneath and legs pale ferruginous: antennæ fuscous, with the club somewhat ferruginous.

It varies considerably in colour; some examples being without the piceous or fuscous hue: probably immature.

Not a common insect: taken sometimes, however, in considerable plenty in old poplars and willows. In July, 1822, I found several specimens in an old felled willow in Walsbam-meadows, near Ripley. The insect has been taken near Norwich.

Sp. 2. bituberculatus. *Oblongo-ovatus, rufo-ferrugineus, nitidiusculus, thoracis lateribus bidenticulatis, disco punctis duabus elevatis.* (Long. corp.  $1-1\frac{1}{3}$  lin.)

Cr. bituberculatus. *Kirby MSS.*—Steph. Catal. 85. No. 923.

Oblong-ovate; rufo-ferruginous, rather glossy, pubescent, thickly and coarsely punctulated: thorax with the anterior angle produced laterally into an obsolete prominent tooth or hook, and about the middle of the margin furnished with a minute denticulation: its disc with two distinct elevated smooth tubercular dots: antennæ rather stout.

The two elevated tubercles on the disc of the thorax, and the coarsely punctate upper surface of this species, combined with its light hue, serve to discriminate it from its congeners.

Not uncommon in fungi, &c. throughout the metropolitan district; and in other parts of the country. “North Wales and Netley.”—*Rev. F. W. Hope.*

Sp. 3. humeralis. *Oblongo-ovatus, subconvexus, picco-ferrugineus, punctulatus, elytrorum basi pallidè testaceo, antennis pedibusque pallido-testaceis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Cr. humeralis. *Steph. Catal. 85. No. 924.*

Oblong-ovate, slightly convex, pitchy-ferruginous, thickly but finely punctulated; somewhat pubescent; head pitchy: eyes black; thorax with the lateral margins finely denticulate, the disc very convex, pitchy testaceous: elytra pitchy-ferruginous, with the base pale testaceous, clothed with a short, golden pubescence: antennæ and legs pale testaceous.

Var.  $\beta$ . With the upper surface entirely of a pale ochraceous:—probably immature.

The deep pitchy colour of the type of this species, with the paler base of the elytra, and more convex form, are its chief characters.

Found near London.

Sp. 4. *uncinatus*. *Oblongo-ovatus, rufus, elytris pedibusque testaceis, thorace angulis anticis recurvis*. (Long. corp.  $1\frac{1}{4}$  lin.)

Cr. *uncinatus*. *Marsham MSS.*—Cr. *uncinatus*. *Steph. Catal.* 85. No. 925.

Oblong-ovate, rufous, slightly pubescent, finely punctured; head with a transverse impressed line behind: thorax with the anterior angle produced into a small hook, and the lateral margin furnished with a minute denticulation about the middle; the elytra and legs testaceous.

Somewhat resembling Cr. *bituberculatus*, but the thorax is destitute of the tubercular elevations, so conspicuous in that species.

This is probably the *Cryptophagus acutangulus* of Gyllenhal—and not the following species, as referred to in my Systematic Catalogue.

From the Marshamian Collection; but taken within the metropolitan district, and near Ipswich.

Sp. 5. *Marshami*. *Oblongo-ovatus, rufo-ferrugineus, punctulatus, thoracis marginæ laterali sinuato-dentato, antennis crassioribus*. (Long. corp.  $1\frac{1}{4}$  lin.)

Cr. *Marshami*. *Steph. Catal.* 85. No. 926.

Oblong-ovate, rufo-ferruginous, slightly pubescent, and very finely punctulate: the thorax with the disc slightly convex, thickly punctured, the lateral margins sinuato-dentate, the anterior angle being produced into a small recurved denticulation, and the middle into an angular projection; the legs and antennæ are deep rufo-ferruginous, the latter rather stout.

This species differs from its congeners, by having the lateral margins of the thorax less distinctly toothed, the margin itself forming a kind of gradual undulation, of which the apex is nearly in the centre.

From the Marshamian collection: it has been captured near London, and I believe in other places.

Sp. 6. *Lycoperdi*. *Oblongo-ovatus, fusco-ferrugineus, profundè punctatus, pubescentia longiorè tectus, thoracis lateribus acutè bidentatis*. (Long. corp.  $1-1\frac{1}{2}$  lin.)

Cr. *Lycoperdi*. *Herbst.*—*Steph. Catal.* 85. No. 927.

Closely resembling *Cr. Populi*, but smaller, and more deeply and coarsely punctate; of a deep fusco-ferruginous, clothed with rather long hairs; head dull ferruginous: eyes black: thorax with the margins blackish, with the anterior angle obliquely acuminate, and a minute denticulation in the middle of the lateral margin, the disc slightly convex: elytra with the suture rather obscure, punctate, the impressions less distinct than on the thorax, and towards the suture somewhat disposed in lines: body pale ferruginous beneath, scarcely pubescent: legs pale testaceous: antennæ brownish, with the club paler.

More deeply punctate, and clothed with a longer pubescence than the following species.

Not uncommon in the neighbourhood of London, feeding upon *Lycoperdon Bovista*: in plenty at Guildford, in company with *Lycoperdina immaculata*, in Sept. 1821. "Not unfrequently taken among herbage (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 7. *fumatus*. *Oblongo-ovatus testaceus, tenuè punctatus, pubescens, thorace subquadrato, lateribus obtusè bidentatis*. (Long. corp. 1 lin.)

*Co. fumata*. *Marsham*.—*Cr. fumatus*. *Steph. Catal.* 86. No. 928.

Oblong-ovate, testaceous, slightly but thickly punctate, and finely pubescent: head and antennæ as in the last: thorax subquadrate, rather elongate, the lateral margins nearly straight, with an obtuse tooth at the anterior angle, and a minute slightly prominent one in the middle, the disc slightly convex: elytra ovate, but little convex, clothed with a delicate pale pubescence: body obscurely testaceous beneath; legs paler.

Differs from the last in being much less deeply punctate, of a paler colour, and clothed with a much shorter pubescence; as well as in the form of the thorax, by which characters it chiefly differs from the two or three following species.

Far from uncommon near London, frequenting the vicinity of houses, stables, &c. "Taken at the Willows (near Swansea), not common."—*L. W. Dillwyn, Esq.*

Sp. 8. *Ulicis*. *Oblongo-ovatus rufo-testaceus, pubescens, elytris dilutioribus, vix punctulatis, antennis pedibusque pallidè rufo-ferrugineis*. (Long. corp.  $\frac{3}{4}$ —1 lin.)

*Cr. Ulicis*. *Kirby MSS*.—*Steph. Catal.* 86. No. 929.

Less than the last: oblong-ovate, rufo-testaceous, slightly pubescent: head and thorax rather brighter rufous than the elytra, which are somewhat ochraceous, and acute at the tip, clothed with a very short, pale down, and obsoletely punctulated throughout, the puncta towards the suture disposed in lines: the thorax is short, broader anteriorly than behind, the disc somewhat convex, the lateral margins with the anterior angle forming an obtuse recurved tooth, and



an obsolete denticulation towards the middle; the space from thence to the base finely crenulated: legs and antennæ pale rufo-ferruginous.

Smaller than either of the foregoing; less distinctly punctate; the sides of the thorax less denticulated and somewhat crenulated.

Frequently taken in the metropolitan district; also in Suffolk.

Sp. 9. *Abietis. Oblongior, ferrugineus pubescens, thorace posticè angustiori margine serrato anticè unidentato.* Long. corp.  $1-1\frac{1}{4}$  lin.)

Cr. *Abietis. Paykul.—Steph. Catal. 86. No. 930.*

Rather oblong, of a deep rufo-ferruginous, thickly punctate, pubescent: antennæ ferruginous, rather slender, with the tip paler: thorax subquadrate, rather broader anteriorly than its length, and narrower posteriorly, the disc rather convex, finely punctulate and slightly pubescent; the lateral margin with the anterior angle somewhat reflexed and produced into an obtuse tooth, from thence to the hinder angle finely serrated; elytra elongate: body rufo-testaceous: legs paler.

The crenulated bidentate margin to the thorax, as well as the greater length and convexity of the insect, although of smaller size, distinguish this species from the preceding.

Not very abundant; found chiefly on the spruce fir, and also in houses, &c., near London, at Bristol, &c. “Near Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 10. *cellaris. Oblongo-ovatus, fusco-ferrugineus, pubescens, elytris nigro-fuscis, thorace brevi lateribus bidentatis, posticè crenatis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Cr. *cellaris. Paykul.—Steph. Catal. 86. No. 931.*

Oblong-ovate, fusco-ferruginous, slightly punctate and pubescent; thorax short, the disc slightly convex, thickly and somewhat faintly punctured, the margin, especially the posterior, dusky, the lateral ones produced at the anterior angle into an oblique acuminate tooth, and in the middle into an acute prominent one; from thence to the posterior angle very finely crenulated; scutellum black; elytra acute, clothed with a pale pubescence, sometimes entirely black, at others with the base dull ferruginous, or entirely pale testaceous; body beneath pitchy-ferruginous; the apex paler; legs pale testaceous.

Very variable; in some instances the entire surface is rufo-testaceous.

The posteriorly crenulated and bidentate lateral margins of the thorax, and usually deep fuscous or black elytra, with the base more or less ferruginous, are the most evident characters.

In certain years this insect is far from uncommon in particular situations: in the autumn of 1815 I found a considerable quantity of specimens in an old house that was undergoing repair, at Hert-

ford, and a few in the following spring:—it also occurs beneath the bark of trees, in dunghills, &c. “Ensham, Oxon.”—*Mr. Westwood*.

Sp. 11. *serratus*. *Oblongo-ovatus, fusco-ferrugineus, pubescens, thorace subrotundo posticè scrobiculato, lateribus serrulatis, elytris punctulatis*. (Long. corp. 1 lin.)

*Co. serrata*. *Marsham*.—*Cr. serratus*. *Steph. Catal.* 86. No. 932.

Oblong-ovate, fusco-ferruginous, pubescent, deeply punctate; thorax subquadrate, with the margins a little rounded and serrated, the disc glossy, black, convex; elytra oblong, slightly convex, a little punctulate: clothed with rather long pubescence; pitchy-brown, with the apex somewhat paler: body pitchy-black, with the tip paler: antennæ and legs pale rufo-ferruginous.

Some examples are of a paler colour;—probably immature.

The rounded margins to the thorax, giving that part a rounded appearance, combined with their crenulations and the absence of a denticle towards their middle, at once point out the characters of this species.

Common throughout the metropolitan district, especially in the autumn and spring. “Not uncommon under bark (near Swansea), and Mr. Jeffreys has found it rather plentiful in the decaying flowers of *Ilex europæus* in May.”—*L. W. Dillwyn, Esq.*

Sp. 12. *ruficornis*. *Oblongo-ovatus, rufo-piceus, crebrè punctatus, subpubescens, capite elytrorumque apicibus dilutioribus, antennis rufis*. (Long. corp. 1 lin.)

*Cr. ruficornis*. *Steph. Catal.* 86. No. 933.

Oblong-ovate, deep rufo-piceous, with the head and apex of the elytra pale, the latter especially: the thorax short, subquadrate, with the lateral margins produced into a sharp denticulation at the anterior angle, and a second about the middle, less distinct and somewhat obtuse: the elytra are rather deeply and very distinctly punctate throughout, the punctures disposed in lines, especially near the suture: the head and thorax are both rather coarsely punctate: legs pale ferruginous; antennæ rufous.

The bright rufous antennæ of this species, with the deep colour of the elytra, and the coarsely punctate surface, distinguish this small species from its congeners.

Taken within the metropolitan district.

B. With the lateral margins of the thorax very obsoletely crenulated: the tarsi with the second and third joints bilobed\*.

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\* The two insects which belong to this section of *Cryptophagus* differ in several points from the type of that genus, and will probably hereafter be formed into a genus;—in the structure of the tarsi they closely resemble the insects of the following genus, with which Latreille unites one of the species, but in other points they disagree.

Sp. 13. Caricis. *Oblongus, niger, holosericeo pubescens, antennis pedibusque rufo-testaceis, thorace longiori.* (Long. corp. 1—1½ lin.)

Ips Caricis. Olivier.—Cr. Caricis. *Steph. Catal.* 86. No. 934.

Oblong, black, thickly clothed with an ashy-greenish silken pubescence: head triangular, thickly punctured: thorax rather long, the base and apex truncate, the posterior angles slightly acuminate; the lateral margins regularly dilated and rounded, and rather obsoletely crenulated; the disc very convex, black, finely punctured, and densely pubescent: elytra rather long, the apex rounded, very convex, thickly but irregularly punctate: body pitchy-black beneath, punctulate, the apex pale testaceous: legs short, pale rufo-testaceous; tarsi fuscous.

From the following this is distinguished by having the tarsi and legs concolorous, the thorax more elongate, the antennæ rather shorter; and by its smaller size.

Found in marshy places, but not common. “Taken by Dr. Leach on Crwmllyn Burrows.”—*L. W. Dillwyn, Esq.*

Sp. 14. Typhæ. *Oblongus, niger, holosericeo pubescens; antennis pedibusque pallidè testaceis unicoloribus, thorace breviori transverso.* (Long. corp. 1—1¼ lin.)

Cr. Typhæ. *Fallen.—Steph. Catal.* 86. No. 935.

Oblong, black, clothed with a silken down, with the antennæ, legs and tarsi of a pale testaceous; the thorax short, transverse, anteriorly truncate, posteriorly subsinuated; the angles slightly prominent: elytra fuscous-black, clothed with cinereous down: body beneath pitchy-testaceous, with the apex paler.

Distinguished from the foregoing by having the thorax shorter, the antennæ rather longer and more slender, the elytra clothed with a cinereous down, and the legs and tarsi of one colour, pale testaceous.

Found in marshy places throughout the metropolitan district, but not very abundant. “On the flowers of *Caltha palustris*, and on other aquatic plants, not uncommon, particularly about Crwmllyn Bog.”—*L. W. Dillwyn, Esq.* “Aquatic plants, Copenhagen-fields, June.”—*Mr. Ingpen.* “Cambridgeshire and North Wales.”—*C. Darwin, Esq.*

#### GENUS CXLIV.—BYTURUS, *Latreille.*

*Antennæ* shorter than the thorax, the two first joints robust, the first slightly elongate, the second ovate, the three following short, obconic, of equal length, the three next shorter, slightly stouter, the remainder forming an elongate club, the two first joints of which are transverse-trigonal, the last larger and subacuminate. *Palpi* filiform: *head* trigonal, narrowed anteriorly: *eyes* large, globose: *thorax* subtrapeziform, broader behind, with the angles distinct,

acute: *elytra* elongate, narrow, attenuated behind, and covering the abdomen: *body* oval: *tibiæ* slender; *tarsi* with the basal joint small, the second and third joint bilobed, the fourth minute, concealed within the lobes of the preceding; *claws* long, bent.

Byturus agrees with the insects of the last section of Cryptophagus in having the third joint of the tarsi bilobed, but it differs from them in the structure of the antennæ and in the form of body; from Mycetæa and the other kindred genera it differs also by the same characters:—the only indigenous species frequents flowers.

Sp. 1. tomentosus. *Fusco-piceus aut testaceus, flavescens-griseove-pubescent, antennis pedibusque flavo-testaceis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

De. tomentosus. *Fabricius.*—By. tomentosus. *Steph. Catal.* 86. No. 939.

Piceous-brown or testaceous, densely clothed with a short griseous pubescence: head narrowed anteriorly, forehead depressed, punctate; mouth testaceous; eyes large, globose, black: thorax truncate anteriorly, subsinuated posteriorly, and rather wide; the disc convex, punctate: scutellum small, rounded, obtuse: *elytra* oblong convex, attenuated posteriorly, thickly punctate, and densely pubescent: body beneath fusco-piceous, pubescent, the apex paler: legs anteriorly pale testaceous.

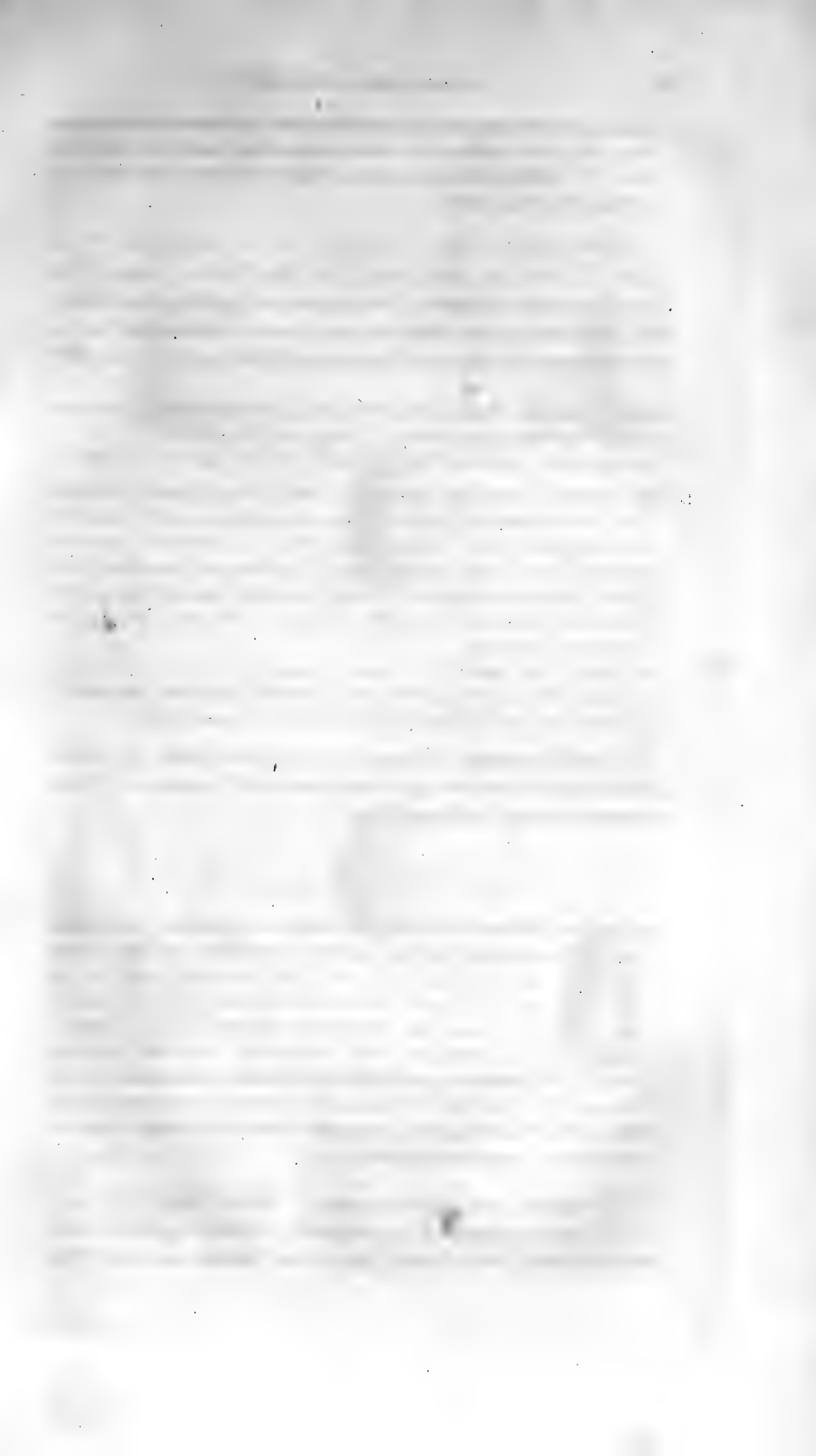
The colour of this species varies greatly; occurring of various shades of testaceous, yellowish, piceous, and brown; sometimes rufescent: the thorax is occasionally fuscous or rufous, and the *elytra* testaceous or piceous.

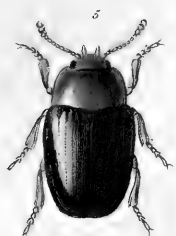
Extremely common in flowers, not only throughout the metropolitan district, but also in other parts of the country. “Near Swansea.”—*L. W. Dillwyn, Esq.*

#### GENUS CXLV.—MYCETÆA, Kirby.

*Antennæ* about as long as the thorax, the basal joint large, robust, subcylindric, the second small, slightly elongate cylindric; the third to the eighth shorter, more slender, and of uniform length; the ninth rather larger, transverse, cup-shaped; the tenth still larger, subglobose; the eleventh very large, ovate obtuse. *Palpi* short, minute, the terminal joint subulated: *head* subquadrate, convex; *eyes* small, nearly prominent: *thorax* short, transverse, emarginate anteriorly, the lateral margins slightly rounded, entire, with a distinct elevated line parallel thereto on the disc: *elytra* ovate, convex, punctate-striated, entire, acute at the apex: *body* convex: *legs* rather short: *tibiæ* simple: *tarsi*, anterior with an appendage at the base.

The singular genus Mycetæa may be known from Byturus, by the different structure of its antennæ, its short, convex form, subulated palpi, the elevated line on the thorax, and other less









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evident characters; from *Cryptophagus* it differs by the integrity of the margin of the thorax, and from *Phloiophilus* by the form of its antennæ:—it feeds on fungi.

Sp. 1. *fumata*.—PLATE xvii. f. 1.—*Oblongo-ovatus, subconvexus, ochraceo-testaceus, pilis brevioribus tectus.* (Long. corp.  $\frac{1}{2}$  lin.)

De. *fumata*. *Marsham*.—*My. fumata.* *Steph. Catal.* 87. No. 940.

Oblong-ovate, slightly convex, pale ochraceous-testaceous, the head and thorax somewhat ferruginous, impunctate: elytra finely punctate-striated, clothed with minute pale hairs: legs and antennæ pale testaceous.

The synonyma given in my Systematic Catalogue, as above quoted, with the exception of the above reference to Marsham, I suspect belong rather to *Typhæa tomentosa* than to the present insect, which so far as I can ascertain appears to be unknown to the continental writers.

Four examples only of this singular insect have come under my inspection: one in the cabinet of the Rev. W. Kirby, a pair in that of J. Scales, Esq. of Beachanwell, and one in my own: of their localities I am ignorant.

#### GENUS CXLVI.—PHLOIOPHILUS, *Waterhouse MSS.*

*Antennæ* rather longer than the thorax, the two basal joints incrassated, subglobose; the third to the eighth gradually shortened, the last being shortest, and the fifth nearly as long as the third; the three terminal ones nearly of equal bulk, forming a distinct club. *Palpi* with the terminal joint conic-acute: *head* subtriangular, rounded anteriorly: *thorax* very short, elliptic-transverse, the lateral margins gradually rounded, the anterior and posterior angles being obsolete, the hinder margin sinuated: *body* elongate-ovate: *elytra* entire, slightly convex: *legs* rather slender, *tibiæ* and *tarsi* slender.

This genus is distinguished by having the two basal joints of the antennæ, as well as the three terminal ones, considerably incrassated; by the former of which characters it differs from all the genera of this family, excepting the two first—*Trichopteryx* and *Anisarthria*—in which the articulations in question are elongate, while in *Phloiophilus* they are subglobose: and the insects are giants compared with their pygmy brethren belonging to the two genera above mentioned.

† Sp. 1. *Edwardsii*. PLATE xviii. f. 1.—*Ater, tennè pubescens, elytris pallidè-testaceo variegatis, antennarum basi tarsisque piceo-rufis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ph. *Edwardsii.* *Waterhouse MSS.*

Deep black, clothed with a short pale griseous or golden pubescence: head thickly and coarsely punctate; mouth piceous: thorax also very coarsely and

thickly punctate, the disc slightly convex, with a large, somewhat indistinct, fovea on each side, and towards the base of the lateral margin a deep impressed space: elytra rather deeply and somewhat coarsely punctate, black, the disc variegated with irregular pale testaceous patches and marks: legs black, with the joints slightly piceous, and the tarsi rufescent: antennæ black, with the base rufescent.

I have seen one example only, which was captured last spring in “Kensington-gardens, in a decayed elm.”—*T. W. Edwards, Esq.*

†Sp. 2. *Cooperi*. *Brevior, rufo-testaceus, elytris pallidioribus maculis obsoletis nigris.* (Long. corp. 1 lin.)

Ph. *Cooperi mihi.*

Rather short, rufo-testaceous, clothed with very short pale down; head somewhat dusky, rather large, finely punctured; thorax rather bright, also finely punctured, with an obsolete fovea on the disc on each side, and an irregular impressed transverse line towards the posterior margin: elytra pale testaceous, rather deeply punctured, with some irregular obsolete black spots and markings; two of which, placed one behind the other near the suture, are more distinct, as well as an elongate oblique one on the shoulder: legs and antennæ pale testaceous: abdomen somewhat piceous in the middle beneath.

Of this insect I have also seen but one specimen, which was found —“Near Cobham, Surry, in September last.”—*A. Cooper, Esq.*

†Sp. 3. *bimaculatus*. *Testaceus, elytris maculâ rotundatâ nigrâ.* (Long. corp. 1½ lin.)

Ph. *bimaculatus mihi.*

Testaceous; each elytron with a large rounded black spot in the middle.

A single example of this insect, which I caught in the spring of 1811, near Barnet, and gave to the British museum collection in 1816 is the only one I have seen; but as the insect has not yet been placed in the Cabinet, and so many years have elapsed since I saw it, I may be mistaken in referring it to the present genus, though I have but little doubt of being correct in my opinion.

## GENUS CXLVII.—TRIPHYLLUS, *Megerle*.

*Antennæ* scarcely as long as the thorax, the basal joint slightly incrassated, subglobose, the second more slender, shorter than the third, which is elongate subclavate, the fourth to the sixth short, slender, the two following rather larger, truncate, the three terminal ones much stouter, the two first truncate, the terminal one ovate. *Palpi* with the terminal joint ovate-truncate; *head* subtriangular, small: *thorax* transverse, the lateral margins obscurely crenulated or entire, the disc slightly convex: *elytra* ovate, convex, punctate: *legs*

rather slender, *tarsi* elongated, the first and fourth joints much longer than the intermediate.

*Triphyllus* is with facility known from *Mycetophagus* by the three last joints alone of the antennæ forming the club, which is somewhat abrupt; from *Phloiophilus* it differs in having but one of the basal joints incrassated, and the thorax angulated posteriorly.

Sp. 1. *punctatus*. PLATE XVII. f. 2.—*Pilosus, ferrugineus, elytris crebre, vagèque punctatis, fusco-castaneis, basi punctoque intra apicem ferrugineis.* (Long. corp.  $1\frac{1}{2}$  lin.)

*Ips punctata. Fabricius.*—Bo. *punctata. Don. xv. pl. 538. f. 3.*—Tr. *punctatus. Steph. Catal. 87. No. 941.*

Pilose, rather convex: head dull ferruginous, thickly and deeply punctate, with a transverse impressed stria above the eyes, which are dusky: thorax with the margin obscurely crenulated, the base somewhat sinuated, the disc convex, deep ferruginous, thickly and deeply punctured: elytra as broad as the thorax at the base, convex, subemarginated anteriorly, thickly, coarsely and irregularly punctate, castaneous-black, or pale fuscous-brown, the base transversely ferruginous, and a small, more or less distinct, ovate spot of the same colour towards the apex: body beneath ferruginous, pubescent, the breast rather dusky and scarcely punctate: legs and antennæ ferruginous.

Not very abundant; sometimes beaten out of the thick herbage in the lane leading to Darent-wood from the house, and occasionally near Coombe: it also inhabits Norfolk, Suffolk, &c. “Netley and North Wales.”—*Rev. F. W. Hope.*

Sp. 2. *bifasciatus. Niger, pubescens, antennarum basi pedibusque ferrugineis, elytris vagè punctatis, fuscis duabus apiceque pallidè testaceis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

*Ips bifasciata. Fabricius.*—Tr. *bifasciata. Steph. Catal. 87. No. 942.*

Black, pubescent; head opaque, thickly and finely punctate, mouth rufo-piceous: thorax scarcely emarginated, the sides rounded, immarginated; the base a little waved; the disc convex, thickly rugose-punctate; the posterior angles and lateral margin from the middle pellucid; elytra slightly convex and glossy, thickly, finely and irregularly rugose-punctate, and clothed with a delicate depressed pubescence; the outer margin and apex generally testaceous, with a rather large, quadrangular, testaceous spot near the shoulders, and a smaller one of similar hue, frequently united to the former, and forming an irregular arcuated fascia; a little behind the middle is another transverse bent fascia of similar colour: body piceous and slightly glossy beneath, finely punctured, pubescent: legs ferruginous: antennæ the same, with the three terminal joints black.

Somewhat rare: I once took a specimen in Copenhagen-fields,

and another in Epping Forest; it has also occurred in the New Forest, and in Norfolk. “Heniault Forest.”—*Messrs. Chant and Bentley*.

GENUS CXLVIII.—MYCETOPHAGUS, *Fabricius*.

*Antennæ* scarcely as long as the thorax, gradually incrassated to the apex, the five last joints forming an indistinct perfoliated club, the four basal joints of which are cup-shaped, the last more or less elongate-ovate. *Palpi* with the last joint rather incrassated, subtruncate: *head* small, triangular: *eyes* slightly prominent: *thorax* transverse, rather convex, broadest posteriorly, and closely applied to the base of the *elytra*, which are subovate: *body* ovate, slightly convex: *tarsi* filiform, simple, four-jointed; the males with the anterior three-jointed only.

The pretty genus *Mycetophagus* may be known by having the capitulum of the antennæ rather indistinct, and composed of five joints; the body oval, with the thorax as broad posteriorly as the base of the elytra to which it is closely applied:—the species are found in fungi during the spring and summer months, and occasionally in the autumn; most of them are local.

Sp. 1. quadripustulatus. *Ferrugineus, antennarum medio, thorace elytrisque nigris, his striato-punctatis, singulo maculis duabus flavescenti-ferrugineis.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{4}$  lin.)

Chr. quadripustulata. *Linné*.—My. 4-maculatus. *Don*. vi. pl. 185. f. 5.—My. 4-punctulatus. *Steph. Catal.* 87. No. 943.

Ferruginous: with the antennæ black in the middle, the apex testaceous: head with a deep impressed striga between the antennæ: eyes blackish-brown: thorax black, narrow anteriorly, the base broad, the angles acuminate; the disc convex, finely punctured, with a deep rounded fovea on each side towards the base; elytra closely applied to the base of the thorax, as in the genus *Amara*; slightly convex, black, or piceous, rather obsoletely punctate-striated, each elytron with two testaceous-yellow spots, one large irregular at the base, and a small truncate one towards the apex: legs pale testaceous.

It varies a little: in some examples, the apical spot on the elytra is obliterated, and in others the two spots are more or less united by a longitudinal flavescent streak.

Common in many places throughout the metropolitan district, frequenting rotten trees, fungi, &c., in the beginning of summer. “Sometimes (near Swansea).”—*L. W. Dillwyn, Esq.* “In profusion at Kimpton.”—*Rev. G. T. Rudd*. Under bark of elms and fungi at Hyde-park and Kensington-gardens, Wandsworth,

Eltham, &c., May and June.”—*Mr. Ingpen*. “Netley, abundant.”  
—*Rev. F. W. Hope*.

Sp. 2. *atomarius*. *Fusco-ferrugineus, supra niger, elytris maculâ humerali, fasciâ posticâ arcuatâ, punctisque disci testaceis, antennarum articulo ultimo brevi ovato.* (Long. corp. 2—2 $\frac{1}{4}$  lin.)

My. *atomarius*. *Fabricius*.—*Steph. Catal.* 88. No. 944.—*Bo. atomaria*. *Don.* xv. pl. 538. f. 2.

Ferruginous-brown; head piceous-brown, punctate; mouth testaceous, with an impression on the forehead: thorax short, truncate, the base bisinuated, the disc convex, black or piceous, finely pubescent and punctate, with a deep fovea on each side towards the base, and three obscure impressions, two on the disc, the third on the middle of the hinder margin: scutellum black: elytra black, punctate-striate, with a large quadrate pale testaceous spot on the shoulder, a little beneath, towards the suture, a small rounded one, then from three to five or six small scattered ones on the disc, afterwards a transverse arcuated abbreviated fascia, and lastly, an ovate or rounded spot towards the apex, all of the same colour: body beneath fusco-ferruginous, with the abdomen paler: legs the same, or pale testaceous.

Rather variable in the form and colour of the spots, the latter being sometimes ferruginous:—and also in the colour of the elytra, which are occasionally pale rusty-brown, with paler markings.

Rather scarce; found occasionally near London, at Bristol, and in the New Forest. “Netley.”—*Rev. F. W. Hope*.

Sp. 3. *multipunctatus*. *Oblongus, ferrugineo-piceus, subpubescens, antennis pedibusque dilutioribus, thorace punctato, elytris punctato-striatis, maculis punctisque plurimis testaceis.* (Long. corp. 2—2 $\frac{1}{4}$  lin.)

My. *multipunctatus*. *Fabricius*.—*Steph. Catal.* 88. No. 945.—*Bo. multipunctatus*. *Don.* xv. pl. 538. f. 1.

Oblong: pitchy-ferruginous; slightly pubescent; with the antennæ and legs paler: the thorax punctate, with a longitudinal central stria; the elytra delicately punctate-striated; with several testaceous spots and markings, as if varied with ferruginous and black, a quadrate spot being placed on the shoulder, a rounded one near the suture, ten or twelve more or less distinct or confluent on the disc, and a larger rounded one at the apex: the body beneath pitchy-brown, or dull ferruginous.

The number and size of the spots on the elytra vary considerably, and the insect is frequently testaceous, with the elytra paler, and the markings more or less obsolete.

Not common in the metropolitan district; found at Coombe,

also near Bristol, in Norfolk, Devonshire, &c. “Near Swansea, not common.”—*L. W. Dillwyn, Esq.* “Netley.”—*Rev. F. W. Hope.*

Sp. 4. *variabilis.* *Piceo-ferrugineus, elytris nigro-piceis, basi maculisque ferrugineis, antennarum articulo ultimo longiori, pallido.* (Long. corp. 2—2½ lin.)

*My. variabilis.* *Hellwig.*—*Steph. Catal* 88. No. 946. *My. piceus.* *Curtis, iv. pl.* 156.

Pitchy-ferruginous or black, the antennæ dusky-ferruginous, with the last joint large and pale ochraceous: elytra pitchy-black, faintly punctate-striate, and slightly pubescent, the base with a broad ferruginous belt, in which is a subquadrate dusky or black spot; surrounding the scutellum, behind the middle, is a variable, abbreviated testaceous fascia, sometimes simple, at others arcuated or truncate, with a minute adjoining spot; and near the apex is a rounded spot of variable dimensions and similar colour: body pale ferruginous beneath: legs slender, ferruginous, or pale testaceous.

Extremely variable; especially in the form and markings of the spots on the elytra, scarcely two individuals agreeing precisely with each other: the spots and fasciæ being more or less confluent, and variable from testaceous to light ferruginous; the ground colour is also frequently black, and sometimes pale ferruginous.

Occasionally taken within the metropolitan district, also in Devonshire, near Bristol; in Norfolk, Suffolk, &c. “In the neighbourhood of Swansea.”—*L. W. Dillwyn, Esq.* “Netley.”—*Rev. F. W. Hope.*

Sp. 5. *Populi?* *Rufo-ferrugineus, subpubescens, elytris pallidioribus, subtiliter punctato-striatis, mediis nigro ferrugineoque variis.* (Long. corp. 2 lin.)

*My. Populi?* *Fabricius?* *Steph. Catal.* 88. No. 947.

Rufo-ferruginous, slightly pubescent; thorax very obscurely punctate: elytra pale, very delicately punctulate, faintly punctate-striate; with an obscure fascia in the middle, and a patch at the apex, fuscous; the latter with an obsolete pale spot: body beneath rufo-testaceous: legs pale rufo-testaceous, or ferruginous.

The insect answering to the above description in my cabinet is the *Boletaria rufa* of Marsham, but it seems too closely allied to *My. variabilis* to be really distinct from that species; its chief distinction consisting in the disposition of the colouring on the elytra, and some trifling variation in form.

One of my specimens was taken near London, the other I obtained from the Marshamian cabinet: the insect has occurred in Norfolk.

Sp. 6: pubescens. *Nigro-piceus, pubescens, elytris dilutioribus basi fasciâ obsoletâ pone medium apiceque ferrugineis; antennarum capitulo distinctè et subabruptè quadriarticulato.* (Long. corp. 2 lin.)

My. pubescens. *Steph. Catal.* 88. No. 948.

Pitchy-black, pubescent, mouth testaceous: thorax rather thickly clothed with a golden pubescence, finely punctate, with a fovea on each side at the base: elytra paler, with an obscure undefined ferruginous fascia at the base, an obsolete abbreviated one beyond the middle, and the apex and lateral margins rather bright ferruginous: the legs and antennæ ferruginous, the latter with the four first joints forming a distinct somewhat abrupt club.

This may be the *Mycetoplagus tetratoma* of De Jean, but as that insect has not yet been described, I am not certain upon the point:—the distinct club of the antennæ, of which the four last joints are somewhat abruptly larger than the rest, would suggest that appellation.

Of this very distinct species I have hitherto seen but the one specimen which is in my own collection: it was taken about five years since near Portsmouth.

#### GENUS CXLIX.—BIPHYLLUS, *De Jean*.

*Antennæ* shorter than the thorax, the basal joint large, robust, obconic, the second rather less, also obconic: the seven following somewhat slender, very short, slightly increasing to the end: the tenth very large, perfoliate, obconic, truncate: the last scarcely so broad as the tenth, rounded. *Palpi* short; the last joint slightly attenuated, truncate: *head* small, depressed: *eyes* small, slightly prominent: *thorax* rather narrowed anteriorly, subsinuated on the hinder margin, the lateral margins slightly rounded, subcrenate, ciliated, with a longitudinal elevated line on each side parallel with the edge: *scutellum* rounded: *body* oblong-ovate, slightly convex: *elytra* entire: *legs* rather short; *tarsi* quadriarticulate?

*Biphyllus* is distinguished from all the preceding genera of this family and all the following, excepting *Bitoma*, *Lyctus*, and *Xylotragus*, by the biarticulate club of the antennæ, but from the latter it may be known by the brevity and convexity of the body, combined with the elevated costa parallel with the lateral margin of the thorax.

Sp. 1. lunatus. *PLATE xvii. f. 3.—Nigro-piceus, pubescens, elytris punctato-striatis, lunulâ duplici dorsali cinereo-pubescente.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

De. lunatus. *Fabricius?*—By. *Sphæriæ.* *Steph. Catal.* 88. No. 949.

Pitchy, or deep, black; slightly pubescent: head finely punctate, with the mouth pale testaceous: eyes brownish: thorax slightly emarginate anteriorly, a little convex, and shining and somewhat thickly punctate: scutellum piceous:

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elytra scarcely broader than the thorax at the base, dilated in the middle, the apex obtusely rounded, slightly convex, pitchy-black, and rather glossy, somewhat deeply punctate-striate, the interstices a little rugose: near the suture on each elytron is a lunate patch, composed of a dense cinereous pubescence, and at the apex a minute round one of similar character: body pale nigro-piceus beneath: legs and antennæ ferruginous.

Rare near London; specimens have been captured in Coombe-wood and other places within the metropolitan district. "Under the bark of ash (near Swansea)."—*L. W. Dillwyn, Esq.* "In plenty on an old ash at Kimpton."—*Rev. G. T. Rudd.* "Netley, &c."—*Rev. F. W. Hope.*

#### GENUS CL.—TRIPLAX, *Paykul.*

*Antennæ* rather short, stout, the basal joint a little incrassated; the second to the seventh short, of nearly equal length and bulk; the eighth slightly larger, somewhat cup-shaped; the three following form an elongate obtuse club, the two basal joints of which are transverse, the terminal ovate, obtuse. *Palpi* unequal, short, the terminal joint securiform: *head* triangular, slightly convex: *eyes* a little prominent: *thorax* convex, the lateral margins entire, the base nearly as broad as that of the *elytra*, the latter oblong-ovate, entire: *body* elongate-ovate: *legs* rather short, simple: *tarsi* obscurely four-jointed, the third joint bilobed, the fourth hidden within the lobe of the third.

Notwithstanding the species of this genus possess but four articulations to the tarsi, the present is doubtless the natural situation of the genus, as in several of the allied genera the fourth joint is more or less obsolete and occasionally completely wanting, while the insects, in common with many others of the family, are found almost exclusively in fungi and similar vegetable productions.

Sp. 1. *russica.* *Oblongo-ovata, rufo-ferruginea, nitida, antennis, elytris, pectore scutelloque nigris.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Si. *russica.* *Linné.*—Tr. *russica.* *Steph. Catal.* 88. No. 950.

Oblong-ovate; glabrous, shining: head rufous, punctate: eyes black: thorax bright rufous, slightly punctate: scutellum black: elytra glossy black, faintly punctate-striated, the interstices smooth: breast blue-black, shining, punctate: abdomen glossy rufo-ferruginous; legs rufo-ferruginous, with the base of the femora dusky: antennæ black.

Considerably larger than either of the other species of this genus, with the breast black.

Not very abundant near London: I have once or twice captured it at Coombe-wood, and in hedges near Darenth. "Occasionally taken on fungi (near Swansea), and by Mr. Millard near Bristol,



under the bark of *Cratægus Oxyacanthæ*.”—*L. W. Dillwyn, Esq.*  
 “Bristol.”—*G. Waring, Esq.* “Winterbourne Stoke.”—*Rev.*  
*G. T. Rudd.*

Sp. 2. castanea. *Oblongo-ovata, elytris castaneis, capite thoraceque flavis.*  
 (Long. corp. 2 lin.)

Si. castanea. *Marsham.*—Tr. castanea. *Steph. Catal. 89. No. 951.*

Oblong-ovate, shining, glabrous: head and thorax ochraceous-yellow: eyes  
 brown: elytra pale castaneous, very obsoletely striated; antennæ castaneous  
 brown: body beneath yellowish: legs pale reddish-yellow.

I suspect that this insect—of which I possess the original specimen, described by  
 Marsham—is a small immature variety of the preceding; it is decidedly not  
 the *Antherophagus pallens* as referred to by Gyllenhal, and recently given as  
 a second species of that genus as above referred to.

Found near London, and in Gloucestershire.

Sp. 3. ænea. *Oblongo-ovata, rufo-ferruginea nitida, antennis nigris, elytris*  
*cæruleo-virescentibus, thorace postice marginato.* (Long. corp. 2 lin.)

Tr. ænea. *Fabricius.*—*Steph. Catal. 89. No. 952.*

Oblong-ovate: shining rusty-red: head punctate; eyes and antennæ black:  
 thorax punctured, its lateral and posterior edges margined: elytra bluish-  
 green, very glossy, punctate-striate, the interstices finely punctulated: scu-  
 tellum rufous: body punctulated beneath: legs reddish.

Distinguished from the two preceding by having the breast rufo-ferruginous,  
 and from the two following by the antennæ being entirely black: the scutellum  
 rufous, and the thorax margined behind.

Not common: I once found a pair in Coombe-wood.

Sp. 4. bicolor.—PLATE xvii. f. 4.—*Oblongo-ovata, rufo-ferruginea, nitida, elytris*  
*nigris, antennis fusco-piceis, basi ferrugineis.* (Long. corp. 2 lin.)

Si. bicolor.—*Marsham.* Tr. bicolor. *Steph. Catal. 89. No. 953.*

Oblong-ovate, rusty-red, shining; head as in the last; eyes black: antennæ  
 ferruginous at the base, the rest pitchy-brown, with the terminal joint some-  
 what testaceous: thorax punctate, the disc convex; the lateral edge alone  
 margined: scutellum rufous: elytra glossy black, rather deeply punctate-  
 striate, the interstices irregularly punctate: body punctate: legs rusty-red.

The black elytra, with the ferruginous base of the antennæ, the absence of a  
 margin to the posterior edge of the thorax, and the greater bulk of this species,  
 distinguish it from the former; from *rufipes* it may be known by the rufous  
 scutellum, more slender form, the deeper striæ on the elytra, and the rufous  
 under surface of the body.

Rare: I possess a pair from the Marshamian collection, and I once  
 beat a single example from a birch-tree in Coombe-wood in June.

Sp. 5. *rufipes*. PLATE xvii. f. 5.—*Ovata, atra, nitida, capite thorace pedibusque pallide rufis, antennarum clavâ fuscâ*. (Long. corp.  $1\frac{3}{4}$  lin.)

Tr. *rufipes*. *Fabricius*.—*Steph. Catal.* 89. No. 954.

Short, ovate, glossy black; with the head, thorax, and legs pale rufous; antennæ the same, with the club fuscous: the head much rounded in front; the thorax very short, convex, punctate, with the lateral edges margined, the posterior one slightly waved, and bearing a delicate transverse impressed line: scutellum black: elytra glossy black, rather obsoletely punctate-striate, the interstices thickly punctulate: legs shining black beneath: the abdomen is sometimes slightly ferruginous.

Known from all the preceding by its black body; and from the following by its rufous head.

Also rare: found near Windsor.

Sp. 6. *ruficollis*. PLATE xvii. f. 6.—*Oblonga, nigra, thorace pedibusque rufis, antennis castaneo-ferrugineis*. (Long. corp.  $2\frac{1}{4}$  lin.)

Tr. *ruficollis*. *De Jean?*—*Steph. Catal.* 89. No. 955.

Oblong, black, shining: head broad, black: thorax bright rufous, convex, punctured; the lateral edges alone margined: scutellum and elytra deep black, glossy; the latter distinctly punctate-striate, with the interstices punctured: body beneath black, with its apex piceous; legs red: antennæ rusty-chestnut.

The black head at once distinguishes this species from its congeners.

Apparently very rare: as yet I have seen but one example, which is in my own cabinet; it was taken, I believe, near Windsor.

## GENUS CLI.—TETRATOMA, *Herbst*.

*Antennæ* as long as the thorax, the basal joint large, stout, elongate; the second also robust, short, subglobose; the third long, obconic, slender; the four following very short; the remainder forming an elongate quadriarticulate club, the three first joints of which are cup-shaped, the terminal one large, ovate. *Palpi* elongate, the last joint obconic, with the apex obliquely truncate: *head* small, deflexed: *eyes* prominent, reniform: *thorax* transverse, margined: *body* oblong, convex: *legs* moderate, or slightly elongate; *tarsi*, four anterior 5-jointed, posterior 4-jointed.

*Tetratoma* is readily known by having the club of the antennæ composed of four joints, a structure that does not elsewhere obtain in this family: the four anterior tarsi are distinctly pentamerous, and the two posterior ones tetramerous:—the known species subsist upon fungi, or beneath the bark of trees.

Sp. 1. Fungorum. *Rufo-testacea nitida, capite antennarumque clavâ nigris, elytris nigro-cæruleis vagè punctatis.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Te. Fungorum. *Fabricius.*—*Steph. Catal.* 89. No. 956.

Shining testaceous-red: head pitchy-black, thickly rugose-punctate: mouth prominent, with the labrum and palpi testaceous: thorax rather narrowed anteriorly, the base a little waved, all the angles and the lateral margins rounded, the disc convex, thickly punctate; pale glossy testaceous-red: scutellum pitchy: elytra shining blue-black, thickly and irregularly punctate; body beneath and legs rufo-testaceous.

Not very abundant: taken occasionally in Coombe-wood; in Norfolk, &c. “Netley.”—*Rev. F. W. Hope.*

† Sp. 2. Ancora. *Capite, thorace pedibusque testaceis, elytris nigris, plagâ magnâ communi lobatâ maculisque pallidis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Te. Ancora. *Fabricius.*—*Curtis, iii. pl.* 123.—*Steph. Catal.* 89. No. 957.

Head and thorax testaceous, thickly punctate: eyes black: scutellum pale testaceous: elytra rather broader than the thorax, thickly and deeply punctate, of a deep brown-black, shining, with a large common lobate pale spot on the disc, and several small ones at the base, and on the margins, variable in form and size: body pitchy-testaceous beneath, punctulate: legs testaceous: antennæ testaceous-red, with the club fuscous.

Whether the Te. pallida of Curtis be an immature specimen of this species, I am not aware.

Rare; or at least very local: specimens have been taken in Hen-hault Forest, the woods near Highgate, Colney-hatch, and in some plenty near Southgate.

## GENUS CLII.—ENGIS, *Latreille.*

*Antennæ* short, stout, moniliform, the three terminal joints forming a large coarctate, obtuse, compressed, perfoliated club. *Palpi* with the last joint obtuse, subulated: *head* small, triangular, deeply immersed in the *thorax*, the latter short, convex, margined: *body* oblong-ovate, glabrous, shining, convex: *legs* short, robust; *tarsi* all pentamerous, the fourth joint smaller than the rest.

The short, abrupt, compressed, perfoliated, triarticulate club of the antennæ, with the obtuse, subulated terminal joint of the palpi; oblong-ovate, glabrous, convex body; short robust legs, and pentamerous tarsi, at once point out the peculiarities of this genus, the species of which frequent Boleti, Agarics, &c., during the spring and summer months.

Sp. 1. *ruffrons*. *Nigro-picea nitida, capite antennis, pedibus, maculâ humerali elytrorum apiceque rufis*. (Long. corp. 1—1½ lin.)

*Ips ruffrons*. *Fabricius*.—*Steph. Catal.* 89. No. 958.

Shining pitchy-black: head thickly punctulate, dull rufous; with the mouth fuscous: thorax subsinuated behind, the disc punctate: scutellum black: elytra oblong-ovate, convex, slightly punctate-striate, with an ovate rufo-ferruginous spot at the base, and a patch of the same hue at the apex: body with the apex ferruginous: legs and antennæ rufo-testaceous, the club of the latter rather pale.

This species varies considerably in colour, apparently from immaturity: some examples being entirely of an immaculate pale testaceous, and others more or less pitchy or brown, with all intermediate shades.

Frequently met with in fungi, boleti, &c., within the metropolitan district: also found in Devonshire, Norfolk, Suffolk, &c. "Not unfrequently found among grass in woods (near Swansea)." —*L. W. Dillwyn, Esq.* "Fungi, near Eltham, June." —*Mr. Ingpen*. "Bottisham, &c." —*Rev. L. Jenyns*.

Sp. 2. *scanicus*. *Nigra nitida, capite, thorace, elytrorum puncto humerali, antennis pedibusque rufis*. (Long. corp. 1¾ lin.)

*De. scanicus*. *Linné*.—*En. humeralis*. *Steph. Catal.* 89. No. 959.

Glossy-black: head rufous, thickly punctate: eyes black: thorax shining rufous, the base subsinuated, and slightly margined; the disc very convex, closely punctulate: scutellum black: elytra oblong-ovate, slightly margined, thickly and finely punctate-striate, shining black, with a small ovate rufous spot on the shoulder: body beneath punctate, black, shining, with the apex reddish: legs and antennæ rufous.

Also variable in colour, dependent upon its state of maturity.

The rufous thorax, and want of the rufous patch at the apex of the elytra, distinguish this insect from the foregoing.

Not common; found within the metropolitan district; and also in Suffolk and Norfolk.

Sp. 3. *angustata*. *Angustior, tota pallidè testacea immaculata*. (Long. corp. 1½ lin.)

*En. angustata*. *Kirby MSS.*—*Steph. Catal.* 89. No. 960.

More elongate and slender than the foregoing species, with the anterior surface pale immaculate testaceous; the legs and antennæ rather palest: the elytra sometimes a little clouded with dusky.

It is possible that this insect may be a mere variety of *En. ruffrons*, differing in being somewhat more elongate, and narrower in proportion, than that species; immature specimens of which closely resemble it.

Found near London, and in Suffolk, in fungi.

GENUS CLIII.—IPS, *Herbst.*

*Antennæ* shorter than the thorax, the basal joint longest, stout, subovate or globose; the second shorter than the third, which is slightly elongate; the five following short, more or less cup-shaped; the remainder forming an ovate, compressed, coarctate, perfoliated club. *Palpi* filiform, subequal, the terminal joint subovate, truncate: *head* large, exserted, broad posteriorly: *eyes* small: *thorax* transverse, or subquadrate: *elytra* slightly truncate, leaving the apex of the abdomen exposed: *body* oblong-ovate, convex: *legs* short; *femora* stout; *tibiæ* dilated and compressed at the apex; the intermediate ones serrated exteriorly: *tarsi* five-jointed, the fourth joint minute.

The typical species of *Ips*, by the width of the body, resemble those of the genus *Nitidula*; but from that genus they differ in several characters, as above indicated: all the species subsist upon the sap of decaying trees, and are usually found beneath loose bark, where there is an exudation of sap: they are mostly rare in this country. *Ips ferrugineus* differs from the other species in form, and seems admirably to connect the group of this family, to which the present genus belongs, with *Nemosoma* and its cognate genera.

## A. Body somewhat depressed, rather broad.

Sp. 1. *quadriguttata*. *Subconvexa nigra, nitida, elytris maculis duabus flavescens, pedibus piceo-castaneis.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

*Ips quadriguttata.* *Fabricius.*—*Steph. Catal.* 90. No. 962.

Black, shining; head slightly punctate; thorax quadrangular, with the lateral and posterior edges margined: *elytra* ovate, convex, each with a trilobed yellowish, or whitish, spot at the base, and another towards the apex, a little behind the middle, transverse-ovate, nearly divided in the centre; legs and antennæ pitchy-chestnut, with the club of the latter dusky: body beneath black, or pitchy-red.

This species differs from the two following by its usually smaller size, and by the spots on the *elytra* being flavescens, ochraceous or whitish, and of dissimilar form, as above pointed out.

Taken in abundance, beneath the loose bark of felled oaks in the New Forest, by Mr. D. Bydder, in May: it has also been found near Windsor.

Sp. 2. *quadripustulata*. *Lineari-elongata, subdepressa nigra, elytris maculis duabus rubris, anteriori sinuatâ.* (Long. corp.  $2\frac{1}{2}$  lin.)

Si. *quadripustulata.* *Linné.*—*Ips quadripustulata.* *Steph. Catal.* 90. No. 963.

Linear-elongate, slightly depressed, black, finely punctured: thorax transverse-quadrate, the disc rather flat, the lateral edges broadly, the posterior nar-

rowly margined: elytra each with two red spots, one at the middle of the base sinuated, trilobed, the other a little behind the middle transverse-ovate: legs black; tarsi piceous: antennæ black.

Larger than the foregoing, but smaller than the following, from which it differs in having the spots on the elytra of a brighter red, and the posterior one nearly divided in its centre.

Found beneath the bark of birch and willows, in various places within the metropolitan districts, as Bexley, Coombe, Windsor, Hertford, &c.; but not common. "Near West Farley, in Kent, by Rev. W. Kirby."—*Marsh. MSS.* "In rotten wood, Bottisham, rare."—*Rev. L. Jenyns.*

Sp. 3. quadripunctata. *Nigra nitida, elytris maculis duabus rubris ovatis simplicibus remotioribus.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Ni. quadripunctata. *Herbst.*—*Ips quadripunctata.* *Steph. Catal.* 90. No. 964. *Curtis*, vii. pl. 306.

Subovate, glossy-black, finely punctured, rather convex: thorax with the disc convex, the lateral edges broadly and the posterior narrowly margined, the base nearly as broad as that of the elytra; the latter ovate, with the apex rounded, each with two ovate pale reddish spots, the anterior in the middle of the base, the other, rather behind the middle, transverse: legs pitchy-castaneous, with the tarsi paler.

The remote, ovate, entire reddish or orange spots on the elytra of this insect, which is the largest in the genus, at once point out its distinction from its congeners.

Rare: found near Windsor; in the New Forest, &c., beneath the bark of the birch.

#### B. Body elongate cylindrical.

Sp. 4. ferruginea. *Linear-elongata, subcylindrica, convexa, punctatissima ferruginea, capite obscuriori.* (Long. corp.  $2\frac{1}{3}$  lin.)

Der. ferrugineus. *Linné.*—*Ips ferruginea.* *Steph. Catal.* 90. No. 961.

Linear-elongate, subcylindric, pale ferruginous, shining, thickly and rather deeply punctate; head rather fuscous, eyes black: antennæ ferruginous, with the club dusky: thorax quadrate, convex, slightly margined: elytra linear, the apex truncate, with a single stria at the suture.

Found beneath the bark of dead pine-trees: it has occurred near Norwich, and in other parts of Norfolk; also in the vicinity of Manchester.

#### GENUS CLIV.—NEMOSOMA, Latreille.

*Antennæ* rather longer than the head, the basal joint stout, ovate; the second less robust, short; the five following very short, gradually incrassated; the

eighth and ninth large, truncate perfoliate; the tenth also very large, ovate, and with the eighth and ninth forming a triarticulate club. *Palpi* subequal, filiform, the terminal joint much longer than the others, subcylindric, and slightly acute at the apex: *mandibles* stout; *head* very large, elongate, sulcate anteriorly, as broad as the *thorax*, the latter subcylindric, as long as the head: *eyes* small, lateral, somewhat immersed: *body* linear-elongate, cylindric: *legs* rather short, stout.

The very elongate slender form of this genus, combined with the magnitude of its head, which has a deep frontal sulcus, and the dissimilar structure of its antennæ and palpi, are the most evident points of distinction between it and its allies.

Sp. 1. *elongatum*. *Glabrum, nigrum nitidum, antennis pedibusque rufis, elytris vage punctatis, basi maculâque intra apicem testaceis, fronte profundè sulcato.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Der. *elongatus*. Linné.—Ne. *elongatum*. *Steph. Catal.* 90. No. 965.

Shining black, glabrous, punctate; head convex, with a deep longitudinal channel on the forehead: *thorax* truncate at the base and apex, as broad as the head anteriorly, somewhat narrower posteriorly, the sides and base slightly margined: *scutellum* piceous: *elytra* somewhat remote from the *thorax*, than which they are rather broader; the base is rufo-testaceous, the apex glossy black, with an ovate rufo-testaceous spot towards the tip: *legs* rufo-testaceous; antennæ ferruginous, with the club dusky.

It varies slightly in the proportion of the colour on the *elytra*; in some examples the anterior space is about equal to a third of their length, in others to about half; the apical spot is also larger or smaller in different individuals.

A single specimen caught by myself near Darent-wood in June, 1815, and given to the British Museum. "In plenty during March and April last, in an old elm rail near Sydenham-wood."—*Mr. T. Ingall*, who kindly presented me with a series of the insect, and informs me that a single example has been recently captured by Dr. Howitt, out of a hawthorn bush near Nottingham.

#### GENUS CLV.—SYNCHITA, *Hellwig*.

*Antennæ* much shorter than the *thorax*, rather stout, the two basal joints robust, obconic; the seven following very short, coarctate, and gradually incrassated; the tenth very large, rounded, with an obsolete, small appendage at the apex. *Palpi* filiform: *mandibles* slender, much bent: *head* small, short: *eyes* rather large and prominent: *thorax* transverse-quadrangular, the angles obtuse, the sides margined, the lateral ones crenated: *body* oblong-ovate: *elytra* with the apex rounded: *legs* short; *femora* subclavate.

*Synchita* differs from *Cerylon* in having the two basal joints of the antennæ large, the head rather small, *thorax* transverse-quadrangular.

drangular, the edges distinctly margined, with the angles obtuse, and the base somewhat remote from that of the elytra.

Sp. 1. *Juglandis*. *Fusca, opaca, scabra, antennis pedibus maculæque humerali rufo-testaceis, elytris crenato-striatis, seriatim hispidis.* (Long. corp. 2 lin.)

Ly. *Juglandis*. *Fabricius*.—Ly. *Juglandis*. *Steph. Catal.* 90. No. 966.

Obscure dull fuscous, scabrous: head nigro-fuscous, finely punctured; mouth and labrum testaceous: eyes black: thorax slightly convex, obsoletely punctate, clothed with depressed griseous hairs, fuscous with the anterior margin testaceous: elytra somewhat remote from the thorax and rather broader at the base, dilute fuscous, with an indistinct, indeterminate obscure testaceous spot at the base; the disc rather deeply crenate-striated, with alternate rows of somewhat erect, short, pale cinereous hairs: legs and antennæ ferruginous.

Found within the metropolitan district.

#### GENUS CLVI.—CERYLON, *Latreille*.

*Antennæ* shorter than the thorax, rather stout, the basal joint rather large; the second somewhat smaller, both obconic; the seven following very short, granular, slightly increasing in size; the tenth very large, globose, with a slight acuminate appendage at the apex. *Palpi* filiform, unequal: *maxillary* twice as long as the *labial*, with the last joint elongate, rather attenuated towards the apex, truncate: *mandibles* arcuated: *head* broad, exserted: *eyes* globose, prominent: *thorax* quadrate: *body* oblong-ovate: *legs* rather short; *femora* slightly clavate; *tibiæ* rather broad at the apex.

From *Synchita* this genus may be distinguished by having the basal joint of the antennæ considerably larger than the following, the head broad, deeply inserted in the thorax, the latter immarginate, quadrate, with its hinder margin closely applied to the base of the elytra, the body oblong-ovate, and in other less evident characters.

Sp. 1. *histeroides*. *Depressum, nigrum, nitidum, glabrum, antennis pedibusque rufo-testaceis, elytris obsoletè punctato-striatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Ly. *histeroides*. *Panzer*.—Ce. *histeroides*. *Steph. Catal.* 90. No. 967.

Depressed, black, shining, glabrous: head finely punctured: eyes black; mouth and labrum ferruginous: thorax deeply punctate, immarginate; the base obsoletely bisinuated; closely applied to that of the elytra, the latter as broad as the thorax anteriorly, the sides slightly dilated, the disc a little convex, obsoletely punctate-striated; the apex rounded: body pitchy-black beneath: legs testaceous or obscure rufo-piceous.

Varies a little in colour, according to its state of maturity; being sometimes entirely of a chestnut hue, or ferruginous, or testaceous.



Found occasionally within the metropolitan district beneath the bark of trees: also in Devonshire, Somersetshire, Norfolk, Suffolk, the New Forest, &c. "Not uncommon under the bark of decaying trees (near Swansea)."—*L. W. Dillwyn, Esq.* "Windsor."—*Mr. Westwood.*

Sp. 2. pilicorne. *Oblongum, piceum, antennarum apice pallido piloso.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ca. pilicornis. *Marshall.*—Ce. pilicorne. *Steph. Catal.* 90. No. 968.

Oblong, depressed, piceous, head and thorax punctured, the latter rather broad: elytra striated, the striae somewhat obsolete: legs rufous: antennæ ferruginous, with the apex pale and slightly pilose.

Probably a variety of the foregoing, from which it chiefly differs in being rather more elongate, of a paler hue, with the apex of the antennæ distinctly paler, and very considerably pilose:—probably the Ce. deplanatum of Gyllenhal.

Found beneath the bark of the oak, within the metropolitan district.

Sp. 3. picipes. *Nigrum, nitidum, antennis pedibusque piceis, elytris substriatis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Ips picipes. *Olivier.?*—*Steph. Catal.* 91. No. 969.

Black, shining: head punctured: thorax smooth, obscurely punctulate: elytra obsoletely striated: antennæ and legs pitchy and dull ferruginous.

#### GENUS CLVII.—TRIBOLIUM, *Mac Leay.*

*Antennæ* with the eight basal joints nearly equal, subglobose; scarcely incrassated towards the apex, the three terminal ones forming a loose perfoliated club, the two first joints of which are somewhat bowl-shaped, the terminal one transverse, oval. *Thorax* transverse-quadrate, slightly margined: *body* sublinear, rather depressed: *tarsi* pentamerous, the fourth joint being minute.

† Sp. 1. castaneum. *Ferrugineum, capite thoraceque subtilissime punctatis; elytris punctato-striatis.* (Long. corp. 2 lin.)

Tri. castaneum. *Mac Leay.*—*Steph. Catal.* 90, 409. No. 971\* note.

Ferruginous, with the head and thorax finely punctured, the elytra punctate-striate: body beneath dull piceous: antennæ with the apex pale: legs rufous.

Mac Leay, in the *Annulosa Javanica*, says, "Tribolium castaneum is often to be found in collections as an English insect, but is only, as I suspect, a visiter of our island." Which last remark is probably correct, as the insect is a native of India and Java.

The smooth obscurely punctured thorax, and dull ferruginous legs and antennæ of this insect, are its chief characters of distinction.

Found near London ; in Suffolk, Norfolk, and in other parts of the kingdom, beneath bark ; not very common. “ Near Swansea, under bark.”—*L. W. Dillwyn, Esq.*

Sp. 4. ferrugineum. *Elongatum, ferrugineum, subopacum, antennis pedibusque testaceis, thorace oblongo, postice subbifoveolato, elytris substriatis.* (Long. corp. 1 lin.)

Ce. ferrugineum. *Steph. Catal. 91. No. 970.*

Elongate, ferruginous, rather opaque, with the antennæ and legs testaceous, the thorax oblong, with two obscure foveæ towards the hinder margin, the disc slightly convex and finely punctured ; elytra rounded at the apex, the disc a little convex, rather faintly striate, the interstices rugose, and clothed with very short fine cinereous hairs : eyes dusky.

This species differs from the foregoing by having the thorax elongate, and the body more linear, and slightly in its sculpture.

Found near London. “ Gardens, Chelsea, May.”—*Mr. Ingpen.*

Sp. 5. obsoletum. *Oblongum, rufum, nitidissimum, glabrum, fortius punctulatum, thoracis lateribus dilatatis.* (Long. corp.  $\frac{2}{3}$ —1 lin.)

Ly. obsoletus. *Spence MSS.*—Ce. obsoletum. *Steph. Catal. 91. No. 971.*

Oblong, rufous or ferrugineo-castaneous, very glossy, glabrous, deeply punctured, especially on the elytra ; the lateral margins of the thorax dilated : legs and antennæ pale ferruginous.

The dilated sides of the thorax at once distinguish this from all the preceding species.

I doubt whether this species be truly indigenous ; it is usually found in rice or flour that has been long kept ; though occasionally taken at large, but in somewhat suspicious places.

Found in and about London ; also in Suffolk, and near Hull : in June, 1826, I caught several specimens flying in a garden at Hertford.

#### GENUS CLVIII.—CICONES, *Curtis.*

*Antennæ* with the two first joints globose, stout, the second least : the seven following more slender, gradually increasing in diameter ; the tenth very large, orbicular, pubescent, without a conical appendage. *Palpi* with the terminal joint ovate, subacute : *head* inserted up to the eyes in the *thorax*, which is gibbous, subquadrate, margined, and rather remote from the base of the *elytra*,

which latter are ovate : *legs* moderate ; *femora* slightly elongate, subclavate ; *tibiæ* simple ; *tarsi* distinctly four-jointed.

It appears to me far more natural to place this genus near *Cerylon* than amongst the *Bostricidæ*, to which family it has hitherto been referred ; the structure of its antennæ, &c., and the form of its body, with its general habit, being more intimately allied to the genus above alluded to than to any of the *Bostricidæ*. From the other species of *Engidæ* with the club of the antennæ uniarticulate, *Cicones* may be readily known by the terminal (or tenth) joint wanting a pointed appendage.

†Sp. 1. *Carpini*. *Castaneo-niger*, *subpubescens*, *punctatus*, *elytris maculis aliquot obscure aurantiacis*, *pedibus ferrugineis*, *antennis ochraceis*. (Long. corp. 2 lin.)

Ci. *Carpini*. *Curtis*, iv. pl. 149.—*Steph. Catal.* 91. No. 972.

“Castaneous-black, sparingly covered with stiff yellow bristles : head minutely and thickly punctured : thorax with two obtuse elevations near the middle, behind rugosely punctured : elytra very convex, with three elevated longitudinal lines and a punctured stria on each, more castaneous than the thorax, having an oblique spot near the anterior angle, three near the middle, a transverse lunulated mark, and another near the apex, dull orange : antennæ ochraceous : legs pilose, ferruginous.”—*Curtis*, l. c.

Taken beneath the bark of the hornbeam in Epping Forest, in March, 1826.

#### GENUS CLIX.—RHYZOPHAGUS, *Herbst*.

*Antennæ* much shorter than the thorax, the basal joint large, clavate ; the second much less, truncate ; the third obconic, with the base narrower ; the six following very short, coarctate, rather thickening exteriorly ; the tenth very large, rounded, pilose, with an obscure rudiment of another joint at the tip. *Palpi* very short, filiform : *head* exserted, suddenly contracted before the insertion of the antennæ : *eyes* small, globose : *thorax* subquadrate, its lateral margins entire : *body* linear-elongate : *elytra* truncate : *legs* rather short ; *tibiæ* broad at the apex : *tarsi*, four anterior apparently pentamerous, the two posterior tetramerous.

*Rhyzophagus* is distinguished from *Monotoma* by having the lateral margins of the thorax entire, as well as by less evident characters, and from *Cerylon* and *Synchita* by the distinctly abbreviated, truncate, elytra ; the filiform palpi ; elongate-linear body, the dissimilarity in the form of the head, &c. :—the species are found

beneath the bark of decaying or dead trees, and are usually found in the spring.

Sp. 1. ferrugineus. *Rufo-ferrugineus, glaber, nitidus, thorace profundè punctato, elytris profundè punctato-striatis, antennarum stipite fusco.* (Long. corp. 2—2½ lin.)

Ly. ferrugineus. *Paykul.*—Rh. ferrugineus. *Steph. Catal. 91. No. 973.*

Shining rufo-ferruginous, or piceous, glabrous; head finely punctured, with a fovea on each side: eyes dusky: thorax coarsely punctured, the disc rather convex: elytra slightly convex, deeply punctate-striate: body beneath rufo-ferruginous, rather finely punctate: legs pale testaceous: antennæ with the base and apex ferruginous, the middle pitchy-brown.

Larger than the other species of the genus: differs from the three following in having the thorax more convex and very coarsely punctate, the elytra also more convex and rather deeply punctate-striate, the antennæ dusky in the middle.

Not uncommon in the neighbourhood of London: found in Battersea-fields, near Wandsworth, South Lambeth, &c.; also at Hertford and Ripley. “Among grass in woods, not common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 2. cylindricus. *Cylindricus, ferrugineus, thorace subpunctato, elytris profundius punctato-striatus.* (Long. corp. 2¼ lin.)

Rh. cylindricus. *Steph. Catal. 91. No. 976.*—Not of Panzer.

Cylindric, ferruginous, shining, glabrous: head rather smooth: thorax slightly elongate-quadrate, rather sparingly punctate: elytra deeply punctate-striate: body beneath, antennæ and legs ferruginous, the latter rather palest.

From the preceding this species differs in being more cylindric, less punctate on the head and thorax, and smaller. If Panzer's figure be correct, it cannot represent an insect of this genus; the club of the antennæ being triarticulate, the apex of the elytra not truncate, the fovea dissimilar, &c.: though as he gives a magnified figure of the former it is doubtless given from nature: but notwithstanding these discrepancies, my reference has been explicitly followed in a work professing to be original.

Found near London.

Sp. 3. rufus. *Angustus, rufo-ferrugineus, nitidus, glaber, thorace tenuè punctato, elytris subtilissimè punctato-striatis.* (Long. corp. 2 lin.)

Co. rufa. *Marshall MSS.*—Rh. rufus. *Steph. Catal. 91. No. 975.*

Rather slender, rufo-ferruginous; shining, glabrous; the thorax very finely punctate, the disc slightly convex: elytra a little convex, faintly punctate-striate, the punctures somewhat distinct.

In some respects this insect appears to resemble *Rhy. cribratus* of Gyllenhal, but

it differs in not having the second interstice between the striæ on the elytra wider than the others, and punctate throughout its basal half. *Rh. rufus* is distinguished from the preceding by having the punctures on the thorax very minute, and the striæ on the elytra rather remotely punctate.

Found within the metropolitan district, and, I believe, in other parts. “Bottisham, on timber.”—*Rev. L. Jenyns*.

Sp. 4. *dispar*. *Linearis, nitidus, thorace suboblongo, subtilitèr punctulato, posticè angustiori, elytris punctato-striatis*. (Long. corp. 1—1½ lin.)

Ly. *dispar*. *Paykul*.—*Rh. dispar*. *Steph. Catal.* 91. No. 976.

Linear, shining, colour variable: the thorax rather elongate, very finely punctured, and slightly narrowed at the base: the elytra punctate-striate, slightly convex, the base and apex more or less rufo-ferruginous, the centre with a black or piceous fascia: antennæ and legs ferruginous.

In some examples the thorax above, the breast and base of the abdomen are pitchy-black: others are entirely rufo-ferruginous, with the exception of the fascia on the elytra.

Found near London, but not common. “Occasionally found beneath the bark of oaks (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 5. *bipustulatus*. *Niger aut nigro-piceus, nitidus, glaber, antennis pedibusque ferrugineis, elytris maculâ ferrugineâ ante apicem*. (Long. corp. 1½ lin.)

Ly. *bipustulatus*. *Fabricius*.—*Rh. bipustulatus*. *Steph. Catal.* 91. No. 97.

Black or pitchy-black, shining, glabrous: head punctate, with the mouth ferruginous: thorax transverse, rather narrowed posteriorly, punctate: elytra punctate-striate, with a ferruginous spot near the apex, and sometimes a second at the base: antennæ and legs ferruginous, the club of the former palest.

Some examples are entirely testaceous, or very pale ferruginous; arising probably from immaturity.

Not uncommon in Battersea-fields beneath the bark of decaying trees, and at the roots of grass. “Under bark of decayed elms, in Kensington Gardens, in the winter.”—*Mr. Ingpen*.

Sp. 6. *parvulus*. *Nigro-piceus, nitidus, subdepressus, antennis pedibusque ferrugineis, thorace subquadrato, subtilitèr punctato, elytris testaceis punctato-striatis*. (Long. corp. 1 lin.)

Ly. *parvulus*. *Paykul*.—*Rh. parvulus*. *Steph. Catal.* 91. No. 978.

Shining pitchy-black, somewhat depressed; head piceous, anteriorly testaceous, very finely punctured: eyes black: thorax subquadrate, slightly depressed, and finely punctate: elytra glossy testaceous, sometimes a little clouded with fuscous; slightly convex, punctate-striate, the striæ distinct: body beneath pitchy, with the apex rufous; antennæ and legs ferruginous.

The small size of this insect, with its somewhat depressed body, finely punctured thorax and pale elytra distinguish it from its allies.

Found near London.

### GENUS CLX.—MONOTOMA, *Herbst.*

*Antennæ* shorter than the thorax, rather stout, the basal joint obconic, very large: the second smaller, the seven following very short, granular; the tenth large, globose, with an acute appendage at the tip. *Palpi* unequal, sub-filiform; the *maxillary* with the last joint elongate, attenuated to the apex, truncate: *head* large, porrect, triangular: *eyes* globose, prominent: the *vertex* with an angular prominence: *thorax* oblong-quadrate, truncate anteriorly, with the angles acuminate, prominent, the lateral margins crenulated: *body* oblong-ovate, depressed; *elytra* broader than the thorax at the base; the apex truncate; the *abdomen* exposed at the tip: *legs* short; *femora* clavate.

*Monotoma* differs from *Rhyzophagus* by having the sides of the thorax crenulated; the thorax itself oblong-quadrate, and considerably narrower than the base of the elytra, which latter are very distinctly truncate: the palpi are less filiform, and the femora manifestly clavate: the head is not so suddenly narrowed before the eyes, and the body is more depressed:—from the following genera its truncate elytra distinguish it with facility.

Sp. 1. *picipes*. *Nigra, opaca, subhispida, antennæ pedibusque rufo-ferrugineis, elytris crenato-striatis, thorace posticè bifoveolato.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

*Mo. picipes.* *Herbst.*—*Steph. Catal.* 91. No. 979.

Dull obscure black: slightly hispid, with the antennæ and legs rusty-red, the thorax oblong-quadrate, with its lateral margins finely crenate, the disc slightly convex, rather deeply punctured, with two oblong, rather oblique, foveolæ near the base: elytra broader than the thorax, with the apex truncate; the disc slightly convex crenate-striate, with the interstices transversely rugulose and clothed with very short cinereous hairs.

Slightly variable in colour:—arising from immaturity.

Taken beneath the bark of trees; in putrid wood; also in houses and windows, but not very abundantly. Found in Norfolk, Devonshire, Battersea-fields, and other parts of the metropolitan district. “Petworth, Sussex, September.”—*Mr. Westwood.*

Sp. 2. *angustata.* *Angustata piceo-nigra, antennæ pedibusque ferrugineis, thorace posticè impresso.* (Long. corp.  $\frac{3}{4}$  lin.)

*Co. angustata.* *Marshall MSS.*—*Mo. angustata.* *Steph. Catal.* 92. No. 980.

Allied to the foregoing, but narrower and more glossy; pitchy-black, punctulated, the punctures rather shallow; the thorax rather oblong, with two approximating deeply impressed foveæ behind: elytra very obsoletely striated: antennæ and legs ferruginous.

Found near London. "Taken in Suffolk in May, by Mr. Kirby."—*Marsham MSS.*

Sp. 3. *pallida*. *Angustata, pallidè testacea, subnitida, capite piceo, antennis pedibusque pallidis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

Mo. *pallida mihi*.—*Steph. Catal.* 92. No. 981.

Narrow, pale testaceous, slightly glossy: the head pitchy, the antennæ and legs pale.

The form of the preceding, but somewhat larger: it may however be an immature state thereof; its principal difference consisting in the pale colour.

Found near London, and in Norfolk.

#### GENUS CLXI.—CRYPTA, *Kirby MSS.*

*Antennæ* considerably longer than the head and thorax combined, the basal joint robust, large, cylindric; second short, subglobose; the third to the tenth nearly of equal length and very slightly increasing in bulk towards the apex; the eleventh rather larger ovate-acuminate. *Palpi* with the terminal joint securiform: *mandibles* rather prominent: *head* broad, porrect and attenuated in front: *eyes* large, prominent: *thorax* subcylindric, slightly margined on the sides: *elytra* entire, rounded at the apex: *body* slightly convex, elongate-ovate: *legs* rather short, stout; *femora* slightly incrassated; *tarsi* somewhat dilated.

The securiform palpi of this genus at once distinguishes it from all the other genera of the present section of the family; and its gradually thickened and scarcely clavate antennæ also form a peculiarity.

Sp. 1. *bipunctata*. *Testacea, capite abdomine punctoque versus apicem elytrorum nigris.* (Long. corp. 2—2 $\frac{1}{4}$  lin.)

An. *bipunctatus*. *Fabricius*.—Cr. *bipunctata*. *Steph. Catal.* 92. No. 982.

Testaceous: head black or pitchy: thorax rather finely punctured, immaculate: elytra rather obsoletely striated, the interstices transversely punctulated, with a round black spot on the disc a little behind the middle and towards the outer margin; the portion of the suture between which is also black: abdomen black: legs and antennæ testaceous, the tip of the latter dusky or black. The thorax is frequently reddish or rufo-ferruginous.

Not very abundant; found in Devonshire, Somersetshire; I believe in Norfolk, and within the metropolitan district, having taken

it several times at Hertford in the month of June. “Near Cambridge.”—*C. Darwin, Esq.*

## GENUS CLXII.—SYLVANUS, *Latreille*.

*Antennæ* as long as the thorax, rather stout, eleven-jointed, the basal joint large, clavate, the two next smaller, obconic, the five following very short, subturbinate; the ninth and tenth stout, truncate, perfoliate; the eleventh equally stout, rounded. *Palpi* very short, unequal, subfiliform; the terminal joint larger and subcylindric: *head* prominent and narrowed anteriorly: *eyes* slightly prominent: *thorax* elongate, its sides more or less dentate, somewhat remote from the *elytra*, which are rounded at the apex: *body* elongate, narrow, sublinear, depressed: *legs* short; *femora* stout; *tarsi* four-jointed.

*Sylvanus* has the club of the antennæ triarticulate, and by that character, united to the equal length of the second and third joints of the antennæ, filiform palpi, and elongate more or less crenate or denticulate thorax, it may be distinguished from the other genera of this group.

### A. With the sides of the thorax considerably denticulate.

Sp. 1. *Surinamensis*. *Fusco-testaceus, pubescens, thorace sulcato, utrinque sex dentato, elytris punctato-striatis, interstitiis alternis elevatioribus*. (Long. corp.  $1\frac{1}{2}$  lin.)

De. *Surinamensis*. *Linné*.—Sy. *Surinamensis*. *Steph. Catal.* 92. No. 983. note.

Fusco-testaceous, pubescent, the thorax with three longitudinal elevated lines, the lateral margins with six stout denticulations: *elytra* punctate-striate, the alternate interstices elevated: legs testaceous.

Found not uncommonly in brown sugar, whence I infer that it is merely an imported species; its native country, according to the Linnean name, being Surinam.

Sp. 2. *dentatus*. *Rufescens, elytris lineis elevatis tribus obsoletis, thorace punctis duobus impressis, lateribus dentatis*. (Long. corp. 2 lin.)

Cor. *dentata*. *Marsham*.—Sy. *dentatus*. *Steph. Catal.* 92. No. 984. note.

Obscure reddish: antennæ, head, and thorax, dusky; *elytra* brighter, with three elevated obsolete striæ, between which are other slender ones: thorax with the lateral margins crenate-dentate, and two impressed foveæ near the base: posterior femora with a strong tooth.

Taken in similar situations with the last; consequently a doubtful native.



## B. With the sides of the thorax unidentate.

Sp. 3. *unidentatus*. *Testaceo-ferrugineus, punctulatus, oculis nigris, thorace elongato, postice angustato, angulis anticis acuminato-productis, elytris punctato-striatis*. (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

De. *unidentatus*. *Fabricius*.—Sy. *unidentatus*. *Steph. Catal.* 92. No. 985.

Testaceo-ferruginous, punctate, glabrous; eyes black; thorax elongated, narrowed posteriorly, with the anterior angles acutely produced, the elytra delicately punctate-striate: legs and antennæ ferruginous.

Not common; specimens have occurred in Henault Forest, beneath the bark of the elm, and in the New Forest, near Brockenhurst, beneath that of the oak, in June and July.

GENUS CLXIII.—BITOMA, *Herbst*.

*Antennæ* shorter than the thorax, with the two basal joints large, subglobose, the seven following small, coarctate, gradually increasing in diameter; the ninth rather larger, truncate; the tenth broad, perfoliate, truncate; the terminal one large, rounded. *Palpi* short, filiform, with the last joint cylindric, obtuse: *mandibles* not exerted: *head* short, obtuse: *eyes* rather prominent: *thorax* subquadrate, nearly as broad behind as the base of the *elytra*; the latter depressed, rounded at the apex: *body* depressed, oblong: *legs* short; *femora* rather stout; *tarsi* four-jointed.

The more prominent distinguishing characters of the genus *Bitoma* consist of the biarticulate club of the antennæ, combined with the concealed mandibles, depressed body, and bicarinated sides of the thorax.

Sp. 1. *crenata*. *Nigra, subopaca, antennis pedibusque rufo-piceis, elytris punctato-striatis rufis, cruce nigra, interstitiis alternis elevatis*. (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Mo. *crenata*. *Panzer*.—Bi. *crenata*. *Steph. Catal.* 92. No. 986.—*Curtis*, vi. pl. 283.

Black, slightly opaque; head obsoletely punctate, with the mouth ferruginous: thorax with the lateral edges nearly straight, deeply margined, and parallel thereto two elevated lines; the disc rather flat, with two obsolete foveæ towards the hinder margin, opposite the scutellum: elytra a little wider at the base than the thorax, punctate-striated; with the alternate interstices elevated; the disc red, with a black cross: body beneath pitchy-black, rather finely punctured: legs and antennæ ferruginous; femora dull pitchy-red.

Variable: in some instances the elytra are black, with a small humeral and apical red spot only:—in others the insect is ferruginous, with a brownish obscure cross on the elytra.

Not very common within the metropolitan district: it has however occurred at Little Chelsea, where it was first observed by Mr. Haworth:—it has also been taken abundantly in the New Forest,

between May and August, beneath the bark of various trees. "Windsor Forest, under bark of rotten oak, 17th July, 1830."—*Mr. Westwood.*

### GENUS CLXIV.—CORTICARIA, *Marsham.*

*Antennæ* rather longer than the thorax, the basal joint large, globose; the second smaller, elongate, obconic; the third to the fifth more slender, elongate; the three following shorter, gradually increasing; the ninth and tenth large, somewhat distant, cup-shaped; the terminal one still larger, subglobose. *Palpi* robust; *maxillary* with the terminal joint conic, acuminate: *head* transverse, narrowed before the *eyes*, which are lateral and prominent: *thorax* subcordate, not angulated, immarginate: *body* oblong, slightly convex: *elytra* entire, more or less ovate: *legs* short: *femora* incrassated; *tibiæ* simple, slender at the base; *tarsi* elongate, slender, tetramerus?

Corticaria appears to be distinguished from Latridius principally by the form of the antennæ and thorax, the first having the third joint not distinctly smaller than the following, and the second more elongate, the club stouter, with its terminal joint ovate; the thorax is not subquadrate, and is not margined; the body is more elongate and convex, and more or less pubescent.

Sp. 1. pubescens. *Fusco-ferrugineus, longius pubescens, thorace longiore subcordato, lateribus crenato, foveâ majore posticâ impresso, elytris punctato-striatis.* (Long. corp. 1—1 $\frac{1}{4}$  lin.)

La. pubescens. *Illiger.*—Co. pubescens. *Steph. Catal.* 92. No. 987.

Ferruginous-brown, or dusky-piceous, or pale testaceous, rather densely pubescent; head obsoletely punctate: thorax subcordate, rather elongate, with the lateral margins slightly rounded and obsoletely crenated, the disc rather convex, thickly rugose-punctate, with a large rounded impressed fovea behind the middle towards the base: elytra slightly convex, thickly punctate-striate, the interstices also with a series of impressions, and in certain positions appearing transversely rugulose; especially towards the base: body beneath entirely pitchy-black or rufo-ferruginous, with the breast and base of the abdomen dusky: legs and antennæ ferruginous.

Differs from the following in being larger, and by having the thorax more elongate, with its sides more crenate, and the sculpture more deeply excised.

Found in grassy places within the metropolitan district; also beneath the bark of trees, in dunghills, &c. not uncommon.

Sp. 2. crenulata. *Fusco-picea, longius pubescens, thorace brevior rotundato, lateribus obsoletius crenulato, elytris punctato-striatis, transversim-subrugosis.* (Long. corp. 1 lin.)

*La. crenulatus.* Schüppel.—*Co. crenulata.* Steph. Catal. 93. No. 988.

Colour variable, pitchy or ferruginous-brown, or black, or testaceous; dusky-pubescent: thorax rather short, rounded, truncate at the base and apex, the lateral margins equally rounded, and scarcely narrowed posteriorly, very obsoletely crenated; the disc slightly convex, rather thickly punctulate, with a more or less distinct fovea at the base, behind the middle; elytra as in the last species, but less transversely rugose.

Smaller than the foregoing, with the thorax shorter in proportion; its sides more regularly rounded, less crenate, and the elytra less evidently transversely rugose.

Also found within the metropolitan district; in Battersea-fields, and at Hertford I have frequently taken it. "In dry fungus, Walham Green."—*Mr. Waterhouse.*

*Sp. 3. denticulata.* Fusco-picea, brevius pubescens, thorace brevior rotundato, lateribus obsoletius crenato, elytris simpliciter punctato-striatis, interstitiis vix rugulosis. (Long. corp. 1 lin.)

*La. denticulatus.* Schüppel.—*Co. denticulata.* Steph. Catal. 93. No. 989.

Fusco-piceous, or variable in colour, like the two foregoing; rather shortly pubescent, with the thorax as in the last, the sides being obsoletely crenate; the elytra also of similar form, slightly convex, very sparingly pubescent, each with eight distinct striæ, with the interstices impunctate and very obscurely rugose: legs rufo-testaceous.

Closely resembling the preceding, but less pubescent, and the interstices on the elytra destitute of punctures.

Found near London, less abundantly than the foregoing.

*Sp. 4. longicornis.* Nigra, subnitida, tenuè pubescens, antennis pedibusque rufescentibus, thorace longiore, cordato, lateribus mutico, elytris simpliciter punctato-striatis. (Long. corp. 1 lin.)

*La. longicornis.* Herbst.—*Co. longicornis.* Steph. Catal. 93. No. 990.

Black, rather shining, slightly pubescent: thorax rather elongate, with the lateral margins considerably dilated and rounded before the middle, smooth, not crenate, towards the base slightly narrowed; the disc moderately convex, thickly punctured, with an obsolete slightly impressed fovea behind the middle at the base: elytra with the shoulders and apex rounded, each with eight punctate striæ, the interstices impunctate, but finely rugulose transversely: body beneath glossy black, with the breast punctate: legs rufo-testaceous, with the femora sometimes dusky: antennæ with the basal half rufescent, the rest dusky.

This species is distinguished by being nearly as large as *Co. pubescens*, and by having the sides of the thorax entire, smooth, the interstices on the elytra impunctate, &c.

Found within the metropolitan district.

Sp. 5. linearis. *Elongata, fusco-ferruginea, subpubescens, thorace cordato, foveolâ mediocri impresso, elytris convexis punctato-striatis, transversim rugulosis, interstitiis impunctatis.* (Long. corp.  $\frac{3}{4}$  lin.)

De. linearis. Paykul.—Co. linearis. Steph. Catal. 93. No. 991.

Elongate, dusky-ferruginous, slightly pubescent, with the thorax cordate, the base very narrow, and having a moderately impressed fovea behind the middle, the lateral margins very finely and obsoletely crenulated, the disc slightly convex and punctured; elytra anteriorly half as wide as the base of the thorax, the shoulders rectangular, the lateral margins slightly dilated, the disc a little convex, each with eight striæ, the interstices impunctate, but obsoletely rugulose transversely: body punctulate beneath: legs pale testaceous: antennæ ferruginous, with the apex sometimes obscure.

Shorter, but more elongate and convex than the foregoing, with the margins of the thorax crenulated, &c.

Also found within the metropolitan district.

Sp. 6. ferruginea. *Sublinearis castanea, glabra, capite nigricante, thorace quadrangulo punctatissimo, elytrorum latitudine, elytris pallidioribus simpliciter punctato-striatis.* (Long. corp. 1 lin.)

Co. ferruginea. Marsham.—Steph. Catal. 92. No. 992.

Sublinear, castaneous, glabrous: head dusky or piceous, with the forehead sub-convex, punctulate: eyes black: thorax nearly quadrangular, slightly narrower than the thorax, a little convex, finely punctured, with a small impressed foveola behind the middle near the base: elytra with the shoulders rectangular, moderately convex, pale testaceous, regularly punctate-striate, the interstices impunctate: body beneath rufo-brunneous, scarcely punctulate; legs pale rufous: antennæ pale.

The comparative width of the thorax of this species distinguishes it from all its congeners but the following, from which it may be known by its more elongate and distinctly punctulated thorax, glabrous body, and different colour.

A very abundant species throughout the metropolitan district, frequenting houses, windows, &c. "Kensington Gardens, Coombe-wood, &c."—Mr. Ingpen.

Sp. 7. elongata. *Sublinearis, depressa, testacea, longius pubescens, thorace transverso elytrorum latitudine, elytris pallidioribus punctato-striatis.* (Long. corp. 1 lin.)

La. elongatus. Schüppel.—Co. elongata. Steph. Catal. 93. No. 993.

Sublinear, depressed, clothed with elongate pubescence: head testaceous, forehead flat, punctured: eyes black: thorax transverse, the sides nearly straight, with two or three minute denticles towards the hinder angle, the disc nearly flat, rufo-testaceous, opaque, scarcely punctulate, with a rounded fovea behind the middle at the base: elytra rather wider than the thorax, the shoulders rectangular, the disc a little convex, pale, regularly punctate-striated; the

interstices impunctate: body rufo-testaceous beneath, obsoletely punctured: legs and antennæ pale.

Thorax shorter, the body more depressed and pubescent, but less evidently punctate, than in the preceding insect.

Not common; found within the metropolitan district.

Sp. 8. *gibbosa*. *Brevis, convexa, fusco-ferruginea, thorace angusto, postice rotundato, foveâ transversâ, arcuatâ, impresso, elytris punctato-striatis pilosis.* (Long. corp.  $\frac{1}{2}$ — $\frac{2}{3}$  lin.)

La. *gibbosus*. *Herbst.*—Co. *gibbosa*. *Steph. Catal.* 93. No. 994.

Short, convex, rusty-brown, or dull fuscous, slightly glossy; head with the front thickly punctured: thorax scarcely broader than the head, the sides and base rounded, the disc with a transverse arcuated fovea a little behind the middle: elytra large, anteriorly as broad again as the thorax, the shoulders elevated, those beyond the middle somewhat dilated, with the tip obtusely rounded; the disc convex, punctate-striate and transversely rugulose; the interstices each with a row of short, cinereous, inclined hairs: body pitchy-black beneath: legs and antennæ testaceous; the club of the fovea dusky or black.

Known by its short, convex form, the curved fovea on the thorax, &c.

Not uncommon in many parts of the kingdom; occurring at the roots of grass, in damp hedges, dunghills, windows, &c. “Coombe-wood, Battersea, and Copenhagen-fields, &c.”—*Mr. Ingpen*.

Sp. 9. *transversalis*. *Brevis, convexa, fusco-ferruginea, thorace postice rotundato, foveâ rectâ transversâ impresso, elytris textis, seriatim pilosis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

La. *transversalis*. *Schüppel.*—Co. *transversalis*. *Steph. Catal.* 93. No. 995.

Short, convex, rusty-brown, slightly shining: head anteriorly punctulate: thorax with the base rounded, slightly convex anteriorly, the disc piceous, finely punctulate and pubescent, with a somewhat interrupted transverse straight fovea a little behind the middle near the base: elytra as in the last, with the disc convex, pale fusco-ferruginous, and clothed with rows of hairs between the striæ, the interstices being elevated, narrow, and thickly plaited with transverse wrinkles: body, legs, and antennæ, as in the last.

Rather larger than the last, with the transverse fovea on the thorax straight, and the sculpture on the elytra dissimilar.

Not very uncommon throughout the metropolitan district, beneath the bark of dead trees, &c.

Sp. 10. *pallida*. *Brevis, convexa, fusco-ferruginea, pubescens, elytris testaccis, obsoletè striatis, thorace unifoveolato.* (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

Co. *pallida*. *Marshall.*—*Steph. Catal.* 93. No. 996.

Short, convex, rusty-brown, testaceous, or pale pubescent: thorax short, transverse, with the sides rounded, the base truncate, the disc slightly convex,

thickly punctulate, with a somewhat deep, transverse-ovate fovea behind the middle at the base: elytra slightly convex, testaceous, rather obsoletely striated, the interstices slightly elevated: body beneath piceous: antennæ and legs pale.

Differs from the two preceding by the truncated base of the thorax, as well as in colour, sculpture, &c.

From the Marshamian cabinet.

Sp. 11. *similata*. *Brevis, convexa, fusco-ferruginea, pubescens, thorace transverso, acutangulo, foveis tribus impresso, elytris texatis*. (Long. corp.  $\frac{1}{2}$  lin.)

Lat. *similatus*. *Schüppel*.—Co. *similata*. *Steph. Catal.* 93. No. 997.

Short, convex, rusty-brown, pubescent, with the thorax transverse, the angles acute, the disc with three fovea, rounded or oblong, and moderately deep: elytra slightly convex, testaceous-brown, shining, with rows of hairs, punctate-striate, the interstices narrow, elevated, with transverse wrinkles.

The three foveæ on the thorax, and dissimilarity of the sculpture on the elytra, and its smaller size, distinguish this species.

Found, though rarely, near London.

#### GENUS CLXV.—LATRIDIDIUS, *Herbst*.

*Antennæ* scarcely longer than the thorax, the basal joint very large, globose; the second ovate, larger than the third, which is very short, and, with the five following slender, the third, seventh, and eighth being ovate; the ninth and tenth are large, cup-shaped; the eleventh still larger, subglobose, acuminate. *Palpi* short, robust; *maxillary* with the terminal joint ovate, small: *head* subovate, slightly narrowed anteriorly: *eyes* lateral, prominent: *thorax* subquadrate-cordate, slightly angulated and distinctly margined, narrower than the *elytra*, which are suboval: *body* slightly depressed: *legs* rather elongate: *femora* incrassated; *tibiæ* simple, subclavate; *tarsi* tetramerous?

*Latridius* may perhaps be most readily detected from *Corticaria*, by the structure of the thorax, which is generally more or less angulated and very distinctly margined: but there are other obvious characters, such as the dissimilarity in the structure of the antennæ, form of body, &c. The species are minute, though, notwithstanding, their characters are sufficiently evident; but, like most genera composed of minute species, the present has been much neglected, as may be instanced from the circumstance of its not having received any augmentation beyond the mere list of species contained in my Systematic Catalogue, in two separate publications, professing to be drawn up from original materials, whereas twice the number

there given I have since detected, although scarcely two months have elapsed since the genus was illustrated. The larvæ feed upon mucor.

Sp. 1. *lardarius*. *Elongatus, rufo-testaceus, glaber, thorace oblongo-quadrato, bicostato, elytris amplis, profundè punctato-striatis, apice acuminatis.* (Long. corp.  $1-1\frac{1}{2}$  lin.)

Ten. *lardarius*. *De Geer*.—*La. quadratus*. *Steph. Catal.* 93. No. 998.

Elongate, testaceous-red, glabrous; head irregularly punctate; eyes black: thorax oblong-quadrate, above depressed, unequal, with two longitudinal parallel costæ, reaching from the base to the apex, and at the base a deep fovea, divided into three parts by the elevated costæ, the anterior angles rounded, elevated: elytra large, a little dilated before the middle, towards the apex attenuated, the latter acuminate; the disc moderately convex, pale testaceous, shining, regularly and deeply punctate-striate: legs pale testaceous, with the joints dusky: antennæ pale.

The largest species of the genus, and distinguished by the acute apex of the elytra from the following insect, to which it is most allied.

Not uncommon in various places throughout the metropolitan district, occurring in trees and herbage, or near dunghills, in rotten fruits, &c. “Marton Lodge.”—*Rev. G. T. Rudd*.

Sp. 2. *angusticollis*. *Elongatus, brunneo-testaceus, thorace oblongo-quadrato, bicostato, posticè angustiore, elytris profundè punctato-striatis, apice obtusis.* (Long. corp. 1 lin.)

*La. angusticollis*. *Schüppel*, teste *Gyllenhal*, iii. 186.

Elongate, testaceous-brown, or castaneous; with the thorax oblong-quadrate, more slender posteriorly than in the preceding species, the lateral margins irregularly elevated, the disc unequal, punctate, with two elevated costæ and a transverse interrupted fovea, as in the foregoing: elytra twice as broad at the base as the thorax, the shoulders much elevated, the sides a little expanded, the apex obtusely rounded; disc convex, rather deeply punctate-striated, with the base transversely impressed.

The smaller size of this species, with the more attenuated thorax, obtuse elytra, and dissimilarity of colour, distinguish this from the foregoing insect.

‘Taken near London.

Sp. 3. *rugicollis*. *Brevior, brunneo-testaceus, thorace quadrato, dorso bicostato, elytris punctato-striatis, apice obtusis, interstitiis alternis costato-elevatis.* (Long. corp.  $\frac{3}{4}-1$  lin.)

*Ips rugicollis*. *Olivier*. *E. ii. pl. 3. f. 19. a. b.*

Rather short, testaceous-brown; with the thorax quadrate, the anterior angles laterally produced, rounded, not elevated, the sides straight and base truncate; the disc punctate, unequal, with two elevated costæ, as in the foregoing species: elytra anteriorly twice as broad as the thorax, the shoulders elevated, the sides rather expanded towards the base, the apex rounded, disc very

convex, testaceous-brown, punctate-striate, the suture and alternate interstices elevated: antennæ and legs testaceous; the club of the former dusky. The short, quadrate thorax, smaller size, and elevated alternate interstices on the elytra, distinguish this species.

Inhabits the metropolitan district and Norfolk.

Sp. 4. *carinatus*. *Elongatus, angustus, fuscus, opacus, antennis pedibusque testaceis, thorace subcordato, obsoletè bicostato, elytris punctato-striatis, interstitiis alternis elevatis*. (Long. corp.  $\frac{3}{4}$  lin.)

La. *carinatus*. *Gyllenhal, Ins. Suec. iii. 137.*

Elongate, narrow, fuscous, opaque, with the thorax subcordate, the sides a little expanded before the middle, the margins slightly elevated, narrowed towards the base, the latter truncate; disc anteriorly convex, unequal, with rudiments of two longitudinal costæ, vanishing posteriorly; towards the base a transverse continuous channel: elytra as wide again at the base as the thorax, the shoulders elevated, the apex rounded, the disc slightly convex, regularly punctate-striate, with the suture and the alternate interstices elevated: legs and antennæ testaceous.

Less than either of the foregoing, from which it also differs in its elongate, slender form, subcordate thorax, opaque fuscous colour, &c.

Found occasionally beneath the bark of dead trees near London.

Sp. 5. *hirtus*. *Oblongus, niger, punctulatissimus, antennis pedibusque piceo-testaceis, thorace subquadrato, profundè canaliculato foveolatoque, elytris punctato-striatis, pilis albidis adpersis*. (Long. corp. 1 lin.)

Lat. *hirtus*. *Gyllenhal*.—La. *hirsutulus*. *Steph. Catal. 94. No. 1001.*

Oblong, black, slightly opaque, very much punctulate: head somewhat depressed, oblong-quadrate, with an impressed line on the forehead: thorax subquadrate, rather broad anteriorly, with the lateral margins nearly straight, considerably reflexed and elevated, pilose; disc unequal, with a deep central channel, rather expanded anteriorly, and terminating near the base in a large deep fovea: elytra rounded at the apex, the disc rather convex posteriorly, and towards the base transversely impressed, punctate-striate, clothed with erect, rigid, cinereous hairs: legs rufo-piceous, with the hair of the tibiæ and the tarsi pale testaceous: antennæ nearly the same, with a ferruginous cast.

Distinguished by its deep, slightly shining, black colour, combined with its strongly punctulate surface, subquadrate, deeply sulcated thorax, and pilose elytra.

Taken near London, and in Suffolk. “Pettyward-wood.”—*Mr. Waterhouse.*

Sp. 6. *transversus*. *Oblongus, ferrugineus, thorace brevi, lato, antice subangustiori, postice transversim profundè impresso, collari denudato, elytris profundius punctato-striatis*. (Long. corp.  $\frac{3}{4}$ —1 lin.)

Ips *transversus*. *Olivier*.—Lat. *transversus*. *Steph. Catal. 94. No. 1002.*



Oblong, ferruginous, somewhat thickly punctulated: head with an impressed frontal channel: eyes black: neck exposed, punctulated: thorax very short, transverse, slightly emarginated anteriorly, the lateral margins a little rounded and expanded; the base truncate, with the angles straight, the disc convex anteriorly, obsoletely channelled; with a broad, deep, transverse fovea near the base: elytra anteriorly rather broader than the thorax, with the shoulders slightly rounded, the disc convex, regularly punctate-striate, the punctures rather large: legs testaceous: antennæ ferruginous.

Var.  $\beta$ . Lat. crassicornis. Steph. Catal. 94. No. 1003.

The deep transverse impression at the base of the thorax, with the comparatively greater width of the latter to the elytra, and the exposed neck, sufficiently characterize this species.

Abundant beneath the bark of trees, the roots of grass, in dung-hills, cellars, &c., from August to May, throughout the metropolitan district.

Sp. 7. porcatus. *Oblongus, nigro-piceus, antennis pedibusque rufo-testaceis, thorace subcordato, angulis anticis rotundato-ampliatis, elytris nitidis, profundè punctato-striatis.* (Long. corp. 1 lin.)

Lat. porcatus. Herbst.—Steph. Catal. 94. No. 999.

Oblong, pitchy-black, punctulated: head opaque; mouth reddish: eyes black, very prominent: thorax subcordate, emarginated, waved anteriorly, the angles rounded and ample, the sides oblique, deeply margined: the disc opaque, convex, with an abbreviated rudimentary channel, and a transverse impression towards the base: elytra as broad again at the base as the thorax, with the shoulders elevated, the sides towards the middle ample, the apex rounded, the disc moderately convex, transversely impressed anteriorly, shining, regularly and deeply punctate-striate: body piceous beneath: legs and antennæ ferruginous.

Var.  $\beta$ . Lat. ferrugineus. Steph. Catal. 94. No. 1000.

This variety differs in being entirely of a ferruginous hue: it also occurs of a testaceous or pale colour, with the head more or less obscure:—in some of the piceous examples the suture and margins of the elytra are often ferruginous.

Kybes has given a long history of the metamorphoses of this species in the second volume of Germars' Magazine, accompanied by figures, whence we learn satisfactorily that the present genus belongs to the Necrophaga; a point however previously ascertained by De Geers' observations on *La. lardarius*.

Also very common throughout the metropolitan district, frequenting the same haunts as the last.

Sp. 8. rugosus. *Oblongus, niger, ore antennis pedibusque ferrugineis, thorace lato, brevi, anticè subangustiore, posticè transversim profundè impresso, elytris obsoletius punctato-striatis.* (Long. corp. 1 lin.)

Lat. rugosus. Herbst. Col. v. 6. pl. 41. f. 3. Cc. :—teste Gyllenhal.

Oblong, black; head punctulate, with the mouth and labrum rufo-ferruginous; eyes black: thorax rather broad, truncate in front, somewhat more narrow anteriorly than at the base, which is truncate, with the angles nearly straight, the disc moderately convex anteriorly, with an obsolete rudiment of a longitudinal groove, and towards the base a deep transverse broad fovea: elytra anteriorly rather broader than the base of the thorax, with the shoulders slightly rounded, the sides a little dilated towards the middle, and the apex rounded; the disc moderately convex, punctate-striate, the punctures small and rather distant: legs and antennæ ferruginous.

Differs from the last by its deeper hue, the brevity of its thorax, which is slightly narrowed anteriorly, and by the faint striæ on the elytra.

Found, though rarely, within the metropolitan district.

Sp. 9. testaceus. PLATE xviii. f. 3.—*Brevis, subconvexus, testaceus, thorace lato, anticè bisinuato, posticè transversim impresso, elytris tenuè punctato striatis.* (Long. corp.  $\frac{3}{4}$  lin.)

Lat. testaceus.—*Waterhouse MSS.*

Short, subconvex, testaceous, slightly glossy: head small, with a slight frontal impression: eyes black: thorax very short, broad; the anterior margin bisinuated, the sides considerably dilated in the middle, the disc slightly convex, with an obsolete longitudinal interrupted channel, and towards the base a deep somewhat trilobed transverse fovea, elytra rather broader at the base than that of the thorax, with the shoulders rounded, the lateral margin a little expanded, the apex slightly acute; the disc somewhat convex, and rather obsoletely punctate-striate: antennæ and legs pale testaceous.

The broad subcordate thorax of this species, the faintly punctate striæ on the elytra, and its pale testaceous hue, sufficiently distinguish it from its congeners.

Taken near London. “Old Brompton, in May.”—*Mr. G. Waterhouse.*

Sp. 10. ruficollis. *Elongatus, pallidè testaceus, nitidus, glaber, thorace oblongo, pone medium constricto, elytris fuscis profundè punctato-striatis.* (Long. corp.  $\frac{3}{4}$  lin.)

Co. ruficollis. *Marsham.*—Lat. ruficollis. *Steph. Catal.* 94. No. 1004.

Elongate, pale testaceous, shining, glabrous; eyes black: thorax oblong, triangulated towards the middle, the anterior portion broadest, with an abbreviated longitudinal channel; the posterior with a transverse impressed line; elytra fuscous, as broad again as the base of the thorax, with the shoulders slightly prominent, the sides at the base towards the middle expanded; the apex slightly acuminate; the disc moderately convex, regularly and deeply punctate-striated, with the alternate interstices somewhat elevated: antennæ and legs pale testaceous.

Var.  $\beta$ . With the elytra pale testaceous.

In some examples one elytron is frequently testaceous, the other fuscous.

Not very uncommon in the neighbourhood of London, and in Suffolk; in July, 1827, I found it flying abundantly in a garden at Ripley, during the afternoon: I have also received it from Bristol. "Under bark of elm trees, Kensington Gardens."—*Mr. Waterhouse*. "Taken in the neighbourhood of Swansea."—*L. W. Dillwyn, Esq.*

Sp. 11. *elongatus*. *Angustus, pallidè castaneus, aut testaceus thoracè oblongo, pone medium constricto, elytris profundius punctato-striatis.* (Long. corp.  $\frac{3}{4}$ — $\frac{11}{12}$  lin.)

Lat. *elongatus*. *Curtis*, vii. pl. 311.—Lat. *angustatus*. *Steph. Catal.* 94. No. 1005.

Elongate, narrow, pale-chestnut, or testaceous; head oblong, coarsely punctured: eyes black: thorax oblong, strangled near the base, the disc coarsely punctured, the sides margined and slightly recurved: elytra very long, and twice as broad as the thorax, elliptical and depressed, each with six rows of very large and strongly impressed punctures; the space between the fourth and fifth forming a sharp ridge: antennæ and legs sometimes paler, and tinged with ochre.

Larger than the foregoing, with the thorax more elongated, and narrower anteriorly, and the punctures on the elytra deeper and larger.

Found in various places throughout the metropolitan district; in abundance near Southgate: also found near Bristol, in the New Forest, Devonshire, &c.

#### GENUS CLXVI.—EUTHEIA\*, *Waterhouse*.

*Antennæ* larger than the head and thorax, the eight first joints rather slender, short; the basal one more robust than the two following, subcylindric; the fourth larger than the adjoining, subglobose; the three terminal ones much more robust than the rest, and forming a distinct club, the two basal joints of which are transverse-quadrate; the terminal one triangular, acute. *Palpi* very minute: *head* small, convex: *thorax* convex, the anterior angles rounded, the posterior acute, the base truncate, with a row of impressed dots: *elytra* slightly convex, pilose, plicate at the base, truncate at the apex, and shorter than the *abdomen*, which has the apex exposed: *legs* short; *femora* incrassated; *tibiæ* simple.

*Eutheia* is apparently closely allied to *Scydmaenus*, from which it differs in having the elytra truncate, the palpi shorter, and the general habit that of an *Atomaria*:—it perhaps, with *Cryptophagus*

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\* *Eutheia*, rectus, in allusion to the straight apex of the elytra.

plicatus of Gyllenhal, may form a natural transition from the Scydmanidæ to the Pselophidæ; to the former of which families I should have referred it, were it not that the engraving of the species was in too far advanced a state to permit its omission in the present volume.

Sp. 1. Scydmanoides. PLATE XVIII. f. 2.—*Piceo-nigra, pubescens, thorace pulvinato, posticè lineâ punctorum impressorum, elytris basi plicatis, antennis pedibusque rufo-ferrugineis.* (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

Eu. Scydmanoides mihi.

Pitchy or castaneous-black, slightly glossy, clothed with a golden pubescence: head punctured: thorax punctured, with five impressed foveæ placed transversely near the base: elytra very finely and faintly punctured, the base with two abbreviated impressed lines, giving that part a plicate appearance; the apex sometimes castaneous: legs and antennæ rufo-ferruginous, the club of the latter sometimes fuscous.

Of this remarkable insect I found a single specimen in June, 1827, flying in a garden at Ripley. “Pettyward-wood, near Wimbledon.”—*Mr. Waterhouse*, to whom I am indebted for the drawing, whence the accompanying figure was engraved. “Moss, Highgate.”—*A. Cooper, Esq.*

#### GENUS CLXVII.—XYLOTROGUS\* *mihi*.

*Antennæ* about as long as the thorax, with the two basal joints more robust than the following; the first being cylindric, the second subglobose, the third to the ninth slightly increasing in diameter, the third being longest and the ninth shortest and subglobose; the eighth shorter than the seventh, and the two apical joints forming an abrupt biarticulate club, the first joint of which is subquadrate, the terminal ovate obtuse. *Palpi* very short: *mandibles* exserted: *head* broad: *eyes* large, prominent: *thorax* cordate; the anterior margins produced in front, the lateral margins entire, produced anteriorly into an obtuse angular projection, and rounded from a little beyond the middle to the base, producing a waved outline; the base truncate: *elytra* elongate, entire: *body* elongate-cylindric: *legs* short: *femora* robust: *tibiæ* slender, simple: *tarsi* slender, abbreviated, quadriarticulate.

The distinctly cordate thorax of this genus, of which the anterior angles are produced into an obtuse projection, while the posterior ones are gradually rounded off, and the margins not crenate, united to the elongate-cylindric body, dissimilarity in the structure

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\* Ξυλον, lignum; Τρωγω, rodo.

of the antennæ, and other less evident characters, point out its chief distinctions from *Lyctus*.

Sp. 1. *brunneus*. PLATE xviii. f. 4. *Elongatus, brunneus, glaber, capite thoraceque piceo-fuscis, punctulatis, elytris obsoletè striatis subtilissimè punctulatis*. (Long. corp.  $2\frac{1}{2}$  lin.)

Genus 163. *parasiticus mihi*.—*Steph. Catal.* 94. No. 1008.

Elongate, brown, glabrous; head piceous-brown, very delicately punctured, with a transverse impression between the eyes, the latter black: thorax truncate-cordate, pitchy-brown, thickly punctured, with a broad, shallow, longitudinal fovea on the disc: elytra elongate, bright castaneous brown, delicately striate; the interstices thickly, but finely, punctured: legs and antennæ pitchy-ferruginous.

Averse as I am to the changing of a name once given, without powerful reasons, I am induced to do so in this instance, from a firm conviction of the impropriety of the one I originally applied.

The only example I have seen was taken in July, 1826, out of a wasp's nest at Dulwich.

#### GENUS CLXVIII.—LYCTUS, *Fabricius*.

*Antennæ* nearly as long as the thorax, rather stout, pilose, the basal joint robust, cylindric, the second rounded, somewhat thickened, the third to the ninth short, nearly equal, the tenth very large, truncate; the eleventh also large, conic. *Palpi* short, filiform, with the last joint arcuated: *mandibles* exerted, with the apex bifid: *head* porrect, anteriorly narrow: *eyes* large, globose: *thorax* subquadrate, with the lateral margins crenate, rather narrower behind than the *elytra*; the latter linear, entire: *body* sublinear, elongate: *legs* short, slender: *femora* rather incrassate: *tibiæ* simple.

*Lyctus* may be known from *Xylotrogus* by the subquadrate thorax, the lateral margins of which are finely crenulated, and the disc rather deeply channelled; the body is broader and more depressed, with the elytra pilose:—the intermediate joints of the antennæ are shorter and subglobose, and the terminal one acute:—the species frequent dry oak wood, and delight especially in new palings.

Sp. 1. *oblongus*. *Fusco-brunneus, opacus, pubescens, thorace dorso foveâ oblongâ impresso, elytris convexo-cylindricis, striatim pilosis*. (Long. corp.  $1\frac{1}{4}$ — $3\frac{1}{4}$  lin.)

*Ips oblonga*. *Olivier*.—*Ly. oblongus*. *Steph. Catal.* 94. No. 1006.

Opaque, deep fuscous-brown, but variable in colour; pubescent; head thickly rugose punctate: eyes black: thorax above moderately convex, fuscous,

opaque, thickly rugose punctate, clothed with a dense cinereous-yellow down, with a deep, broad, oblong, abbreviated fovea in the middle of the disc: elytra with the shoulders prominent, slightly convex, rather obsoletely striate, the striæ thickly but faintly punctate, each interstice with a distinct row of depressed, cinereous-yellow, hairs, giving a lineated appearance: body beneath pale testaceous, slightly pubescent: legs pale testaceous: antennæ brunneous.

Var. *β*. *Ly. pusillus*. *Steph. Catal.* 94. No. 1007.—Considerably smaller, and paler in colour.

Very common in the neighbourhood of London, and I believe throughout the country:—it abounds on palings, beneath bark, &c., especially of the oak. “Under the bark of decaying oaks (near Swansea), not uncommon.”—*L. W. Dillwyn, Esq.*

### FAMILY XXI.—DERMESTIDÆ, *Leach*.

*Antennæ* slender, longer than the head, and terminated by a distinct ovoid compressed mass or club, consisting of three or four joints. *Palpi* short, but little exerted, subfiliform, with the terminal joint rounded: *mandibles* very short, slightly denticulate within the apex: *body* subovate or suboval, rounded at both extremities, robust, slightly convex: *head* inflexed, inserted up to the eyes in the *thorax*, which is short, convex anteriorly: *legs* short, robust, the posterior shorter than the body; *tibiæ* spinulose; *tarsi* short, pentamerous.

The Dermestidæ may be known by their ovate equal-ended form, with the body slightly convex, the mandibles very short, stout, and a tooth before the apex; the antennæ rather short, and having an abrupt, compressed, ovoid club, or an elongate capitulum, generally consisting of three or four joints:—the species are usually found in dry or decaying animal substances, such as leather, skins, &c.

The larvæ of the Dermestidæ have the body elongate, gradually diminishing to the tail, which terminates in a truncate cone; the skin is coriaceous, and furnished with long hairs: head scaly, rounded; antennæ triarticulate; mandibles robust and dentate; eyes six: body composed of twelve segments, each with a coriaceous plate, and furnished with two rows of hairs, of which the anterior is directed forwards and the posterior backwards; the three first segments bear each a pair of scaly legs, which are (as usual) divided into three parts, terminated by a slightly curved hook or claw; on the last segment of the body are two kinds of scaly

horns, pointed and directed backwards, and at the tip of the same ring is a truncate fleshy wart, serving as a seventh leg to the animal when in motion:—they change their skin many times; and when about to change into pupæ they construct a cocoon of the refuse of the materials upon which they have been feeding:—they are extremely destructive to collections of natural history and to the stores of furriers, &c., their voracity being very great; and, in feeding, they not only devour the skins of animals, but totally divest them of hair: they also attack the dead bodies of animals of all kinds, consuming all the fleshy and tendinous parts, and leaving nothing but the mere skeleton remaining: they occur every where, and are extremely difficult to guard against by reason of their comparative minuteness; they are, however, of great importance in the economy of nature, by assisting so extensively in the destruction of animal remains, in destroying those portions that are left untouched by the larvæ of the Scatophagæ, &c, which do not touch the skin or tendons: they are usually concealed within the substance of the animal, rarely appearing upon the surface; and when disturbed they quit their retreat with apparent fear, and walk timidly and irregularly, and if touched instantly remain quiet, retracting their antennæ and legs.

The indigenous genera of this family may be thus characterized:

Antennæ thorace	{	æquales. <i>Palpi</i> articulo	{	bilobo: .	169. THROSCUS.
		ultimo subsecuriformi: <i>Tarsi</i>			
		articulo penultimo			
	{	breviores. <i>Palpi</i>	{	simplici: .	171. CTESIAS.
		filiiformes, <i>maxil-</i>			
		lares <i>maxillis</i>			
	{	breviores:	{	ovato-truncato:	172. MEGATOMA.
		longiores, ar-			
		ticulo ultimo			
	{		{	elongato-ovato,	173. ATTAGENUS.
	{		{	attenuato:	

## GENUS CLXIX.—THROSCUS, Latreille.

*Antennæ* pilose, as long as the thorax, during repose concealed in grooves beneath the sides of the latter, the basal joint robust, subovate; the second less robust, elongate-quadrate; the six following smaller, subglobose; the remainder forming an elongate, perfoliate club, dilated on the inner edge, the basal joint of which is obovate-truncate, the second transverse, the terminal conical, with its apex acute. *Palpi* short, clavate, the terminal joint somewhat securiform: *head* obtuse, deflexed, inserted up to the eyes in the *thorax*, the latter subtrapeziform, broadest at the base, which is lobate, with the hinder angles produced

into an acute process: *elytra* elongate, slender: *body* elliptic, depressed: *sternum* produced into a somewhat cylindric ridge, obtuse posteriorly and received into a cavity: *legs* small, compressed, contractile; *femora* broad; *tibiæ* linear, with a groove on the external edge to receive the *tarsi*, which are slender, and have the penultimate joint bifid.

The location of this genus is perhaps objectionable: Linnæus placed it with *Elater*, and Latreille in his *Histoire Naturelle* followed his views; but in the *Genera Crustaceorum* he removed it to the *Byrrhii*, a situation whence he again ejected it in his *Familles Naturelles*, and restored to its former position, placing it in a section by itself: how far that situation may be natural must be left for future observations: there is some agreement in the trophi, but the antennæ are very dissimilar to those of any of the *Elateridæ*, and not widely unlike those of *Megatoma serra* in the present family:—the larvæ are supposed to be lignivorous, and the perfect insect is generally found beneath bark or in similar places, like several of the insects in the foregoing family, which has induced me to place it here. The genus may be known from *Dermestes* by the greater length of the antennæ, by the last joint of the palpi being remarkably large and somewhat securiform, and by the bifid penultimate joint of the tarsi.

Sp. 1. *dermestoides*. *Oblongo-ovatus, fusco-piceus, pubescens, elytris punctato-striatis; interstitiis seriatim punctatis; fronte lineis duabus elevatis.* (Long. corp.  $1-1\frac{3}{4}$  lin.)

*Elater dermestoides.* Linné.—Th. *dermestoides.* Steph. *Catal.* 95. No. 1009.

Oblong-ovate, pitchy-fuscos, slightly pubescent: head obtuse, with the forehead convex, punctate, with two elevated lines: eyes black: thorax emarginate anteriorly, the base trilobed, the disc convex, coarsely and finely punctulated, with a faint ridge before the scutellum: *elytra* slightly convex, punctate-striate, with a series of large punctures between each stria: body beneath and legs pale rufo-piceous: antennæ fuscous.

Frequently taken near London from May to August: in June, 1815, I found a considerable number of specimens on some old oak wainscoting at Coombe-wood; and I have since found some in similar situations at Hertford and Ripley. “On white thorn and umbelliferous plants near Bexley.”—*Mr. Bainbridge*. “Gravel pit, Coombe-wood, abundantly, in June.”—*Messrs. Ingpen and Westwood*.

Sp. 2. *obtus.* *Ovatus, sordide castaneus, pubescens, elytris striatis, interstitiis punctulatis, fronte immune.* (Long. corp.  $\frac{3}{4}-1$  lin.)



*Th. obtusus.* *Westwood MSS.*—*Curtis*, iv. pl. 163. *Steph. Catal.* 95. No. 1010.

Ovate, dull castaneous, shining, clothed with short decumbent yellowish hairs: head rounded, coarsely punctured: eyes black: thorax anteriorly entire, coarsely punctured, the base trilobed, the disc rather convex, slightly elevated before the scutellum: elytra slightly convex, striated, the interstices minutely punctured: antennæ and legs ferruginous; tarsi paler.

In June, 1827, I captured a single example of this species in a lane near Ripley: the insect had been previously taken in other parts of the metropolitan district, and it has also been found subsequently. "Several specimens taken from a pollard oak in Plaistow Marshes, in 1827 and 1828."—*A. Cooper, Esq.* "Two specimens beaten out of an oak near Ensham, in Oxford, in September."—*Mr. Westwood.* "Moss, Highgate-wood, in the winter."—*Mr. Ingpen.*

#### GENUS CLXX.—DERMESTES *Auctorum.*

*Antennæ* shorter than the thorax, the basal joint large, ovate; the seven following joints rather slender, short; the remainder forming a large, ovate, triarticulate compressed club, dilated interiorly, the basal joints of which are somewhat transverse, the terminal short suborbiculate. *Palpi* filiform, stout; the *maxillary* shorter than the maxillæ: *head* small, retractile: *thorax* rather broader than long, sinuated behind: *body* oblong-ovate, convex, pubescent: *elytra* elongate, inclined laterally and slightly margined: *legs* short; *femora* slightly incrassated; *tibiæ* spinulose; *tarsi* entire, the first joint shorter than the second.

*Dermestes* differs from *Throscus* in having the antennæ shorter than the thorax, with the capitulum ovate and not elongate, the tarsi entire, with the first joint shorter than the second, and the palpi filiform; from *Megatoma* and *Attagenus* it differs by having the latter shorter than the maxillæ, and the club of the antennæ more distinct, as well as in other less evident characters.

The species are very destructive in museums, larders, repositories of skins, and similar places, especially in the larva state as above mentioned.

Sp. 1. *lardarius.* *Oblongus, niger, elytris anticè fasciâ latâ cinereo-pubescente, punctis tribus nigris.* (Long. corp. 3—4 lin.)

*De. lardarius.* *Linné.*—*Barbut*, pl. iii. f. 1. *Steph. Catal.* 95. No. 1015.

Oblong, black; head thickly punctulated: with the mouth rufous: thorax

pubescent, sprinkled with small tufts of cinereous hairs: elytra finely and thickly punctured, with very obsolete rudiments of striæ, the base with a broad pale fascia, composed of a dense cinereous pubescence, in which are three brownish or black denuded spots, and on the posterior margin is a somewhat flexuous cinereous patch: body beneath pitchy-black, with the breast densely and the abdomen sparingly clothed with a shining cinereous down: legs pitchy-black: antennæ rusty-piceous, with the club dusky.

When the pubescence is removed, the anterior portion of the elytra is rufescent.

The larva is of a whitish-brown above, white below, furnished with long hairs, and two scaly hairs on the last segment:—it infests skins, &c.

Extremely abundant in houses, larders, &c. throughout the metropolitan district; and not unfrequently found in neglected boxes of insects: also in dead bodies, dunghills, and amongst heaps of dried bones. “Under garbage at Swansea, not uncommon.”—*L. W. Dillwyn, Esq.* “Bottisham, common.”—*Rev. L. Jenyns.*

Sp. 2. *murinus*. *Oblongus, niger, supra cinereo marmoratus, scutello fulvescente, subtus niveus, antennis nigris.* (Long. corp. 3—4 lin.)

De. *murinus*. *Linné.*—*Samouelle, pl. i. f. 4.* *Steph. Catal. 96. No. 1016.*

Oblong, black, pubescent, marbled above with cinereous; the head with a few griseous hairs intermixed: thorax very convex, thickly ornamented with transverse undulated bluish-ash characters and two distinct remote fulvescent spots behind the middle: scutellum fulvescent: elytra obsoletely punctated and very obscurely striate, pubescent, marbled like the thorax with bluish-ash: breast and abdomen snowy-white: antennæ and legs black, the femora with a snowy ring.

The fulvescent scutellum, and the bluish-ash pubescence of the thorax and elytra, distinguish this species.

Not uncommon throughout the metropolitan district, frequenting the same haunts as the last: found also in Glamorganshire, Norfolk, Devonshire, &c. “Common (near Swansea) in dead animals, and particularly in half-dried hawks and vermin which have been nailed up by gamekeepers.”—*L. W. Dillwyn, Esq.* “In carcasses, common, at Bottisham, appearing early in the spring.”—*Rev. L. Jenyns.*

Sp. 3. *lanarius*. *Brevis, convexus, ater, glaber, subtus albedo-sericeus, antennis parvis rufo-piceis.* (Long. corp.  $3\frac{1}{2}$  lin.)

De. *lanarius*. *Illiger.*—*Steph. Catal. 96. No. 1017.*

Short, convex, black, glabrous: head punctate: thorax large, convex, thickly punctured: scutellum black: elytra thickly and finely punctured, immaculate: breast and abdomen clothed with a dense silken whitish pubescence, the

sides of the latter with denuded black spots: legs black: antennæ rusty-fuscous.

The short form of this insect, and its totally immaculate upper surface and black scutellum, distinguish this from the foregoing insect.

One example I obtained from the Marshamian cabinet: I am not aware of its locality.

Sp. 5. *tessellatus*. *Oblongo-ovatus, niger, pubescens, capite thoraceque ferrugineo-variais, subtus niveis nigro punctatus, antennis brunneis*. (Long. corp.  $2\frac{1}{2}$ —3 lin.)

De. *tessellatus*. *Fabricius*.—*Steph. Catal.* 96. No. 1019.

Oblong-ovate, black, pubescent: the head and thorax varied with ferruginous, the latter slightly convex and thickly punctured: scutellum pale ferruginous: elytra clothed with a black pubescence, with a few cinereous hairs intermixed: breast and abdomen dotted with depressed rigid snowy hairs, with large denuded lateral spots, and other smaller ones on the disc, forming three series: legs black, thick, with an obsolete whitish fascia beneath: antennæ rusty-brown.

The ferruginous pubescence on the head and thorax, and the three rows of denuded spots on the lower surface of the abdomen, at once distinguish this pretty species from its congeners.

In August, 1814, I found a considerable number of specimens of this insect, both in the larva and imago states, in an oyster on the beach off Shoreham in Sussex; the only locality I am aware of.

Sp. 4. *vulpinus*. *Oblongus, niger, cinereo subpubescens, subtus niveus, thoracis lateribus densius cinereo-villosis*. (Long. corp.  $3$ — $4\frac{1}{2}$  lin.)

De. *vulpinus*. *Fabricius*.—*Steph. Catal.* 96. No. 1018, note.

Oblong, black, with the sides of the thorax having a narrow border of griseo-cinereous down; the breast and abdomen beneath snowy, with some black denuded marginal spots: head pitchy-black, with a griseous pubescence; and rufous mouth: thorax with its disc having a few scattered cinereous hairs; the margins, as above stated, densely pubescent: elytra with a few cinereous hairs: scutellum cinereous: antennæ rufo-piceous: legs piceous, with a white pilose ring on the femora.

Not uncommon in the metropolis, and throughout its immediate vicinity; in large provision-warehouses, kitchens, &c.; but I very much doubt its claim to be placed among the indigenous species, having witnessed ship-loads of hides from the Brazils direct, infested with this species.

GENUS CLXXI.—CTESIAS *miki*.

*Antennæ* as long as the thorax, with the two basal joints robust, subglobose; the six following extremely short, slender and coarctate; the remainder forming an elongate, compressed, triarticulate, serrated club, the basal joint of which is very large, obconic, with the apex truncate and dilated interiorly; the second short, triangular, acute interiorly; the terminal elongate, rather dilated within, and rather attenuated to the apex, which is obtuse. *Palpi*, maxillary, with the third joint longer than the second, the terminal obliquely truncate: *head* small, deflexed, slightly produced anteriorly: *thorax* trilobate behind, the central lobe obtuse, the angles acute: *body* ovate: *legs* short and slender; *femora* rather attenuated; *tibiæ* simple; *tarsi* with the intermediate joints shortest.

Latreille remarks upon the insects included in this and the following genera—and a third species not hitherto detected in Britain—which he has placed as so many sections of the genus *Megatoma*, “*Hujus generis sectione forsân totidem genera constituunt*.”—and if the structure of the antennæ is to be our guide in the formation of genera, which is allowed to be the case, doubtless the present genus must be detached from *Megatoma*, and the latter from *Attagenus*, the dissimilarity not only of those organs, but of the palpi and of the external form, justifying such a measure:—the serrated club of the antennæ, which resembles that of the genus *Throscus*, at once points out the present genus from *Megatoma*, from which the dissimilar proportions of the joints of the palpi, the different lobations of the thorax posteriorly, the broader and stouter body, &c., also remove it.

Sp. 1. Serra. *Niger pubescens, antennis flavis, clavâ magnâ compressâ, internè bis profundè incisâ.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

De. Serra. *Fabricius*.—Me. Serra. *Steph. Catal.* 95. No. 1011.—*Curtis*, vii. pl. 244.

Black, or piceous, or somewhat castaneous, shining, thickly punctured, and clothed with a short dusky pubescence: thorax above convex, with an impression on each side at the base, the lateral margins rusty-piceous: elytra thickly rugose-punctate: legs pale ferruginous or rufescent, with the femora piceous; antennæ testaceous yellow.

“The larva,” says the Rev. J. Burrell in the *Entomological Transactions*, “of D. Serra is a curious ferruginous one, living

under the bark of elms and oaks, where it may be found almost all the year, particularly in the early spring months."

Taken in several places within the metropolitan district, in Norfolk, &c., beneath the bark of trees, especially of elms and oaks, in June:—also found upon palings, and in old wood, and in Boleti. "Gardens at Chelsea."—*Mr. Ingpen*. "Kew."—*Rev. T. T. Haverfield*.

## GENUS CLXXII.—MEGATOMA, *Herbst*.

*Antennæ* shorter than the thorax; the basal joint very stout, oval; the second less robust, subglobose; the four following very slender, subovate; the seventh and eighth rather larger, cup-shaped; the remainder forming a triarticulate, pubescent, club, having the terminal joint elongate-ovate, and twice as long as the others, in the male; subconic, and scarcely elongated, in the female; the penultimate joint short, transverse, in both sexes. *Palpi maxillary* robust; the basal joint minute; the two following short, broad, nearly equal in length; the terminal large, ovate-truncate: *head* small, deflexed: *thorax* slightly trilobate; the central lobe nearly obsolete: *antepectus* produced over the mouth like a neckcloth: *body* narrow-oval: *legs* short, slender; *tibiæ* linear, simple; *tarsi* with the three intermediate joints shortest.

In the structure of the antennæ and palpi, this genus differs considerably from the foregoing, as well as from the following; the former not having the club serrated as in the preceding genus, nor the terminal joint remarkably large, as in *Attagenus*; the maxillary palpi having the two intermediate joints nearly of equal length, and the terminal one ovate-truncate; not elongate and attenuated, as in *Attagenus*, nor obliquely truncate, as in the preceding genus.

Sp. 1. undata. *Nigra, pubescens, thoracis angulis, elytrorumque fasciis duabus remotis undulatis albidis.* (Long. corp.  $1\frac{3}{4}$ —3 lin.)

De. undatus. *Linné*.—*At. undatus*. *Steph. Catal.* 95. No. 1012.

Black, pubescent, minutely punctured, shining: thorax with the posterior angles and a small spot before the scutellum clothed with white pubescence: elytra slightly convex, with two undulated fasciæ, composed of white scales, the former before the middle interrupted, the other behind the middle towards the apex: legs and antennæ black; tarsi piceous.

This species varies considerably in size, as above indicated.

Not very uncommon in the neighbourhood of London, throughout which it appears to be pretty generally distributed, inhabiting

beneath the bark of various trees, and also occurring in houses, flowers, &c. "Taken once under the bark of an elm (near Swansea)."—*L. W. Dillwyn, Esq.* "On walls near Dulwich, in June."—*Mr. Ingpen.* "On a gate-post near York."—*W. C. Hewitson, Esq.* "Epping."—*Mr. Doubleday.* "Under willow-bark, Walthamstow."—*A. Cooper, Esq.* "Kew."—*Rev. T. T. Haverfield.*

### GENUS CLXXIII.—ATTAGENUS, *Latreille.*

*Antennæ* shorter than the thorax, with the basal joint robust, ovate; the second less robust, shorter, subglobose; the three following slender, subquadrate; the sixth to the eighth gradually increasing, cup-shaped; the remainder forming an elongate triarticulate club, the two basal joints of which are short, ovate, or cup-shaped, and the terminal one extremely long and subcylindric-ovate in the male, and ovate subattenuated in the female. *Palpi maxillary* longer than the *maxillæ*; the basal joint minute; the second robust, as long again as the third, which is obovate, the terminal elongate-ovate, attenuated to the apex: *head* small, deflexed, produced anteriorly: *thorax* trilobate behind, the posterior angles and central lobe acute: *body* oval: *legs* short: *femora* and *tibiæ* compressed; the latter spinose externally; *tarsi* with the basal joint minute, the second in the four posterior legs elongate.

Attagenus has the terminal joint of the maxillary palpi considerably elongate and attenuated to the apex, with the second joint much longer than the third; the club of the antennæ is very dissimilar in the sexes, the apical joint being elongate in both, and remarkably long in the male.

Sp. 1. *Pellio.* *Ovatus, niger, pubescens, antennarum basi rufescente, elytris puncto medio albo.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

*Der. Pellio.* *Linné.*—*Don.* vii. pl. 231. f. 3.—*At. Pellio.* *Steph. Catal.* 95. No. 1014.

Ovate, black, shining, thickly and minutely punctured, pubescent: thorax with three white pubescent spots at the base, one at each angle, and the other in the lobe before the scutellum: elytra somewhat piceous or slightly castaneous, with a snowy-white pubescent spot on the back, near the suture: body beneath pitchy-black, clothed with a yellowish pubescence: legs rufo-piceous, with the tarsi paler.

The elytra are slightly variable in colour, being more or less piceous, castaneous or testaceous; and they have frequently an obscure streak of whitish pubescence on the margin, near the base.

Very abundant in houses, larders, &c., within the metropolitan district: it also abounds in other parts of the country: I have taken it at Shoreham, Brighton, Dover, in the Isle of Wight, &c.:—its larva is particularly destructive to neglected collections of natural history. “Found occasionally at Swansea.”—*L. W. Dillwyn, Esq.* “In houses, common.”—*Rev. L. Jenyns.* “Newcastle and York.”—*W. C. Hewitson, Esq.*

†Sp. 2. trifasciatus. *Ovatus, nigro-fuscus, pubescens, elytris fasciis tribus undatis, punctoque apicis cinereo-albidis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

De. trifasciatus. *Fabricius.*—At. trifasciatus. *Steph. Catal.* 95. No. 1013.—*Curtis, vii. pl.* 247.

Ovate, fuscous-black, glossy, minutely punctured and clothed with decumbent hairs: thorax with the posterior margin clothed with a dense ashy-white, or flavescent, down, interrupted before the scutellum; elytra with three flexuous transverse strigæ, composed of a pale griseous pubescence, interrupted by the suture; a patch at the apex of similar hue, and also a minute round spot on each side of the scutellum: beneath piceous, with yellowish pubescence: legs testaceous, with the tarsi castaneous: antennæ black, with the base testaceous.

The only examples I have seen of this species are contained in the collections of the British Museum, and in that of Mr. Haworth: the former specimens were taken by Dr. Leach near Edinburgh, and the latter, according to the Doctor's MSS., “near Chelsea.”

### SECTION III.

Contains insects of very dissimilar aspect and habits, but all of which possess *four palpi* only: the *head* is not produced into a *rostrum* anteriorly, the *tarsi* are almost universally pentamerous, but the antennæ are considerably diversified.

From the heterogeneous structure of the insects included in this division, the latter requires to be thrown into subsections, of which the one more immediately connected with the foregoing insects, or

#### SUBSECTION I.,

Includes such insects as have the *antennæ* more or less clavate, with the apex sometimes rather abruptly slender, the articulations unequal, the basal joint being occasionally nearly half the entire length, the *thorax* frequently with a groove beneath to receive the antennæ, and the *legs* with their parts more or less compressed, and capable of being closely applied to the body, the latter having usually excavations for receiving them: the *sternum* is mostly produced anteriorly, so as nearly to conceal the mouth, and the *body* is either more or less globose and convex, or quadrate and depressed.

This subsection includes the two following indigenous families, which may be readily known by the subjoined concise definitions:

Antennæ	{	haud fractæ: <i>mandibulæ</i> non exsertæ: . . .	22. BYRRHIDÆ.
		fractæ: <i>mandibulæ</i> exsertæ: . . .	23. HISTERIDÆ.

## FAMILY XXII.—BYRRHIDÆ, *Leach*.

*Palpi* subclavate or filiform, equal: *maxillæ* bifid: *mandibles* not exserted: *antennæ* thickened towards their extremities, the articulations of not very dissimilar length, the club composed of from three to five joints: *head* small, very convex, deeply inserted into the anterior margin of the *thorax*; the latter very short, much narrowed anteriorly, with the lateral margins considerably deflexed: *sternum* anteriorly produced: *body* ovoid, very convex, more or less pubescent: *elytra* entirely covering the abdomen: *legs* contractile; *tibiæ* more or less compressed, with an external groove to receive the *tarsi*, which are distinctly pentamerous.

The Byrrhidæ are so intimately allied to the Dermestidæ, that Latreille includes *Megatoma* and its allies in the former family in his *Genera*, and in the latter in the *Règne Animal*: and there is very great similarity between the larvæ of the genus last mentioned and those of the genus *Anthrenus*:—in the perfect state, some of these insects are found in sandy or gravelly situations, in fields, roads, &c.: others occur in flowers, beneath the bark of trees, or by the coast, in chalk-pits, &c.: the larvæ of the *Anthreni* are destructive to animal substances, but those of the typical genus *Byrrhus* are unknown.

The following is a tabular view of the indigenous genera, which may be distinguished by the subjoined, chiefly external, characters:

<i>Antennarum capitulo</i> {	3-articulato.	<i>Thorax</i> posticè {	trilobus. <i>Corpus</i> {	squamosum :	174. ANTHRENUS.
				densè pilosum :	176. TRINODES.
	rotundatus. <i>Elytra</i> {		subpubescens :	175. ASPIDIPHORUS.	
		punctata :	178. NOSODENDRON.		
				striata :	177. SYNCALYPTA.
5-articulato.	<i>Palpi</i> articulo ultimo {	truncato :	.	179. BYRRHUS.	
		acuto :	.	180. SIMPLICARIA.	

## GENUS CLXXIV.—ANTHRENUS, *Geoffrey*.

*Antennæ* very short, concealed during repose in a groove beneath the sides of the thorax, terminated by a solid triarticulate club, the last joint of which is larger



and obtuse, or rounded. *Palpi* filiform, short, the terminal joint elongate, truncate: *head* small, deflexed, retractile: *thorax* trilobed behind: *body* orbiculate-ovate or subovate, depressed, rather flat above, convex beneath, coloured with deciduous scales: *legs* short, compressed, closely applied to the body during repose; the *tarsi* exposed.

The Anthreni may be at once distinguished from the insects of the two following genera by having the surface adorned with coloured scales, exclusively of the difference in the structure of the antennæ, &c., which are capable of being concealed in grooves, formed for their reception, beneath the sides of the thorax, which is considerably produced in the centre before the scutellum: the larvæ infest animal substances, dunghills, &c., and the imago is usually found on flowers.

Sp. 1. Verbasci. *Nigro-fuscus, supra squamis luteis ferè tectus, elytris fuscis tribus albis, tibiis nigricantibus.* (Long. corp.  $1\frac{1}{2}$  lin.)

By. Verbasci. *Linné.*—An. Verbasci. *Steph. Catal.* 96. No. 1020.—An. Scrophulariæ. *Samouelle, pl.* 2. f. 4?

Brown-black: head clothed with luteo-testaceous scales on the forehead: the thorax entirely covered with scales, which are luteous on the disc, with a central streak anteriorly, a spot before the scutellum, and the lateral margins broadly white: elytra nearly covered with luteous scales, irrorated with black, with three white fasciæ, the first interrupted reaching obliquely from the scutellum to the margin; the second flexuous in the middle; and the third, lunate, towards the apex: the body clothed beneath with ashy-white scales, with the margin of the abdomen spotted with black: legs black, with the tarsi somewhat fuscous: antennæ black.

Not common in Britain; found occasionally within the metropolitan district, having taken two specimens only during the period which I have collected. I suspect, therefore, that the following localities refer to An. Musæorum, which species has been generally confounded with the present in the London cabinets. “Bottisham.”—*Rev. L. Jenyns.* “On the flowers of umbelliferous plants, not common (near Swansea).”—*L. W. Dillwyn, Esq.* “Near York.”—*W. C. Hewitson, Esq.* “Epping.”—*Mr. Doubleday.*

Sp. 2. Musæorum. *Nigro-fuscus, ferrugineo irroratus, thoracis lateribus elytrorumque fasciis squamoso-griseis, tibiis ferrugineis.* (Long. corp.  $1-1\frac{3}{4}$  lin.)

By. Musæorum. *Linné.*—An. Musæorum.—*Shaw, vi. pl.* 13.—*Steph. Catal.* 96. No. 1022.

Fuscous-black, irrorated with ferruginous scales; thorax with the disc sparingly dusted with testaceous scales, the posterior angles and the central lobe densely

clothed with whitish ones: elytra with three fasciæ, composed of whitish and lutescent scales, the basal one arising at the base of the elytra, passing down the sides of the scutellum, and bending outwards, when it becomes rather obsolete and irregularly flexuous: the second is a little behind the middle, transverse and flexuous; and the third near the apex rather oblique, and frequently united to the second on the suture or on the margin: body beneath cinereous, with naked black marginal spots: femora black; tibiæ and tarsi rufescent: antennæ ferruginous, with the club obscure.

Variable in size and in the appearance of the transverse fasciæ on the elytra, arising from the latter being more or less denuded: the ferruginous tibiæ distinguish it with facility from the preceding species.

Very abundant in umbelliferous flowers throughout the metropolis, and I suspect equally common in other parts—this insect being usually confounded with the foregoing, from which it is obviously distinct. “Norfolk.”—*Dr. Leach*.

Sp. 3. varius. *Cinereus, thorace elytrisq; fusco cinereoq; variis, corpore subtus immaculato.* (Long. corp. 1 lin.)

An. varius. *Fabricius*.—*Steph. Catal.* 96. No. 1021.

Cinereous, with the thorax and elytra varied with fuscous and cinereous: the body beneath cinereous, immaculate.

Probably a variety of the preceding species, from which it chiefly differs in being smaller, and in having the body immaculate beneath, and rather more clouded above.

Found with the foregoing insect. “Among herbage on Crwmllyn Burrows.”—*L. W. Dillwyn, Esq.*

Sp. 4. Scrophulariæ. *Supra niger, thoracis lateribus elytrorumq; fasciis squamoso-albidis, suturâ rubrâ.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

By. Scrophulariæ. *Linné*.—An. Scrophulariæ. *Steph. Catal.* 97. No. 1023.

Above black; head with a white squamose spot on the front: thorax black, with a slender dorsal line, and a waved subtriangular patch at the hinder angles, densely clothed with whitish scales: elytra with three irregular flexuous white fasciæ, with the suture densely covered with bright rufous scales, expanding towards the apex, in which is a minute black patch, and more or less branching off towards the white fasciæ: body beneath thickly clothed with whitish scales, with the sides of the abdomen spotted with black: femora black, tibiæ and tarsi rufescent: antennæ testaceous, with the club black.

The red suture at once characterizes this beautiful species from its congeners.

Rare in England: it has been captured within the metropolitan district and in other parts; but I know not its exact locality.

Sp. 5. Pimpinellæ. *Supra niger, rufo alboq; variis, elytris fasciâ anticâ latâ, punctoq; apicis albissimis.* (Long. corp.  $1\frac{1}{2}$  lin.)

An. Pimpinellæ. *Fabricius*.—*Steph. Catal.* 97. No. 1024.

Black, varied above with rufous and white scales: thorax with some ferruginous scales intermixed: elytra densely clothed with black scales, with a broad angulated snowy-white fascia before the middle, having a black spot near the suture, and a white spot near the apex, which last with the suture behind is marbled with rufo-ferruginous and whitish scales: body clothed beneath with snowy scales, with the sides of the abdomen spotted with black: femora black, with white scales; tibiæ and tarsi rufescent: antennæ rusty-brown.

The bright broad subcentral fascia on the elytra at once distinguishes this elegant species.

Also very rare in Britain; I have taken it in the vicinity of London, and I believe it has been captured in Suffolk and in Devonshire.

### GENUS CLXXV.—ASPIDIOPHORUS, *Ziegler*.

*Antennæ* about as long as the thorax, the basal joint very large, bent, dilated externally, the club triarticulate, considerably elongated and cylindric: *head* large, angulated, convex: *eyes* rather prominent: *thorax* short, a little emarginate anteriorly, sinuated posteriorly, being slightly produced in the middle; the lateral margins rounded and slightly margined: *scutellum* small, rounded: *elytra* large, slightly emarginated, rounded at the apex: *body* suborbiculate, convex: *legs* slender: *tarsi* elongate, with the four anterior articulations subequal.

Aspidiophorus—not Arpidiophorus, as it has been erroneously called—may be known from Anthrenus and Trinodes by the length of the basal joint of the antennæ, which is elongate and subclavate, as in most of the Histeridæ, to which family it may probably serve to unite the present; but as I have not an opportunity of examining the insect, I cannot be positive upon that point; the description, both generic and specific, being drawn up from Gyllenhal's valuable labours.

† Sp. 1. orbiculatus. *Niger, subpubescens, pedibus rufis.* (Long. corp. 1 lin.?)

Nit. orbiculata. *Gyllenhal*.—*As. orbiculatus*.—*Steph. Catal.* 97. No. 1026.

Black, shining, somewhat pubescent: head minutely punctured: thorax above convex, minutely punctured: scutellum punctate: elytra broader than the thorax, with the sides dilated, the disc very convex, regularly and rather deeply punctate-striate, and clothed with a delicate cinerascens down: body beneath shining pitchy-black, with the breast deeply punctate: legs slender, pale reddish.

While on a visit at Barham, during which period I was engaged

in collecting notes for this work and for my Catalogue, the Rev. W. Kirby informed me that this singular insect had been captured in England by his colleague W. Spence, Esq.; but of its locality he was not aware.

### GENUS CLXXVI.—TRINODES, *Megerle*.

*Antennæ* longer than the thorax, beneath which are no grooves for their reception, the two basal joints very robust, subglobose; the six following slender, gradually diminishing in length, the eighth being shortest and transverse, the remainder forming a triarticulate club, of which the basal joint is smallest, the terminal very large, trigonate. *Palpi* very short, filiform: *head* obtuse, deflexed: *eyes* small: *thorax* short, anteriorly truncate, and narrowed; the base as broad again and distinctly trilobed: *scutellum* moderate, triangular: *elytra* large, ovate, slightly convex; the shoulders gibbous, and, with the head and thorax above, clothed with erect elongate hairs, without any intermixture of scales: *legs* slender, pilose: *tarsi* elongate; the four basal joints equal.

*Trinodes*, a genus whose characters have not hitherto been defined, was established by Megerle for the reception of the *Anthrenus hirtus* of Fabricius; an insect differing so considerably from the type of the genus last mentioned as to justify its separation: its densely pilose body, the hairs of which are erect and comparatively very long; and the length of its antennæ, which have no grooves beneath the sides of the thorax for their reception; sufficiently discriminate it, without descending to other less obvious characters:—the insect, moreover, inhabits decayed wood.

Sp. 1. *hirtus*. *Niger aut griseo-testaceus, nitidus, supra densè hirtus, antennis pedibusque luteis*. (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

*Anth. hirtus*. *Fabricius*.—*Tr. hirtus*. *Steph. Catal.* 97. No. 1025.

Black or griseo-testaceous, shining, with a translucent appearance: head punctate: thorax with the disc anteriorly convex, with an impression between the base and sides: *elytra* faintly punctate, shining pitchy-black, very pilose: body beneath rufo-piceous, slightly pubescent: legs luteo-testaceous: antennæ pale luteous.

Sometimes rather paler in colour.

The only examples I have seen of this insect were captured, I believe, near Exeter, by W. Spence, Esq., who kindly forwarded a pair for my cabinet.

GENUS CLXXVII.—SYNCALYPTA, *Dillwyn*.

*Antennæ* shorter than the thorax, the two basal joints stout, rather elongate, subcylindric, the six following more slender, gradually increasing in diameter, and terminating abruptly in an ovate triarticulate club, the apical joint of which is very large truncate. *Palpi* very short: *head* small, deflexed: *thorax* short, sinuated posteriorly: *elytra* ovate, entire, distinctly striated: *body* very convex, the upper surface furnished with rigid erect capitate setæ, which are disposed in lines on the elytra; the *breast* and *abdomen* also slightly setose: *scutellum* minute, triangular: *femora* compressed, ciliated; *tibiæ* more or less compressed and slightly bent, in some species ciliated externally: *tarsi* elongated, rather slender.

The rigid erect capitate setæ with which the upper surface of the Syncalypatæ is furnished, combined with their striated elytra, abruptly clavate antennæ, and minute size, not only distinguish them from Nosodendron, but, the latter character excepted, from the other genera of this family:—the species are usually found in sandy or chalky situations; but their food and habits, I believe, remain unknown.

Sp. 1. *arenaria*. *Subglobosa, nigra, setis albidis ornatis, elytris substriatis*. (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

*Byrrhus arenarius*. *Sturm.* Genus clxxiv *arenarius*. *Steph. Catal.* 99. No. 1040.

Black, slightly glossy, elytra faintly striate, the striæ simple; the thorax and elytra clothed with short rigid erect whitish capitate setæ, somewhat regularly placed on the latter: the body beneath and legs also black.

Found occasionally in chalk and sand pits within the metropolitan district, but not common. “Not unfrequently found about the roots of moss on Crwmllyn Burrows.”—*L. W. Dillwyn, Esq.* “Norfolk.”—*Dr. Leach*.

Sp. 2. *cretifera*. *Subglobosa, atra, setosa, elytris sublævibus*. (Long. corp.  $\frac{1}{3}$  lin.)

Genus clxxiv *cretiferus*. *Steph. Catal.* 99. No. 1041.

Black, subglobose, slightly glossy; the surface adorned with distant erect white setæ, the elytra nearly smooth.

The nearly smooth elytra of this insect, and its smaller size, appear the chief points of distinction between it and the preceding, of which I suspect it to be a mere variety.

In September, 1821, I found several specimens in a small chalk-pit at Little Blakenham in Suffolk, the locality indicated

below. "Taken in a chalk-pit at Blakenham, near Ipswich, by the Rev. W. Kirby."—*Marsham MSS.*

Sp. 3. *maritima*. *Subovata, atra, obscura, setosa, elytris distinctè striatis, os ferrugineo.* (Long. corp.  $1\frac{1}{2}$  lin.)

Cist. *maritima*. *Marsham.*—Genus clxxiv. *maritimus*. *Steph. Catal.* 99. No. 1039.

Subovate, black or piceous, obscure; clothed with dusky setæ; elytra rather deeply striated; mouth ferruginous: antennæ and legs black.

Rare; taken on the coasts of Norfolk and Suffolk by the Rev. W. Kirby. "Southend, in June last."—*Rev. F. W. Hope*. "Taken by Mr. Millard on Crwmllyn Burrows."—*L. W. Dillwyn, Esq.*

† Sp. 4. *setiger*. *Brevis, ovata, nigricans, setis rigidis erectis adpersis, elytris fuscis tribus obsoletis griseis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Byr. *setiger*. *Illiger.*—No. *setigerum*. *Steph. Catal.* 97. No. 1028.

Short, ovate, dusky or dull black: head, thorax, and elytra above thickly sprinkled with stout erect, capitate, rigid griseous setæ, disposed in lines on the latter, which are rather distinctly striated, and have three flexuous waved griseous-white transverse fasciæ: body beneath and legs dusky-ferruginous; femora and tibiæ exteriorly ciliated: breast and abdomen also with distinct setæ.

Of this pretty insect I have hitherto seen one specimen only, which is in the British Museum, and respecting which an erroneous locality has been given. "A single specimen taken in a bank near Woodland, Devon."—*Dr. Leach.*

#### GENUS CLXXVIII.—*NOSODENDRON*, *Latreille.*

*Antennæ* longer than the thorax, concealed beneath its sides, the two basal joints robust, subovate: the third much elongate, subclavate; the four following very short, submoniliform; eighth broader, cup-shaped; the three following much incrassated, and forming an abrupt, subovate, compressed, perfoliate club, the apical joint being trigonate. *Palpi* very short, the terminal joint largest, cylindric, obtuse: *head* trigonate: *eyes* small: *thorax* scarcely margined, transverse, rounded at the base: *scutellum* triangular, elongate: *elytra* convex, suborbicular, scarcely margined: *body* subhemispheric-ovate: *breast* broad: *legs* short, compressed, semicontractile; *tibiæ* broad, serrated a little exteriorly; *tarsi* short.

The distinct triarticulate club of the antennæ, and fasciolated elytra, remove this genus from Byrrhus, to which genus it is evidently closely allied; and its comparatively large bulk, deeply

punctate—but not striate—elytra, dissimilar structure of the capitulum of the antennæ, expanded tibiæ, and absence of rigid capitate setæ on the surface, point out its distinction from *Syn-calypta*, to which on the other hand it is allied.

Sp. 1. fasciculare. *Nigrum, nitidum, vagè punctatum, elytris punctis elevatis, pilosis, brunneo-fuliginosis, subseriatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Sp. fasciculare. *Fabricius*.—No. fasciculare. *Steph. Catal.* 97. No. 1027.—*Curtis*, vi. pl. 246.

Somewhat elongate-globose, black, shining, finely punctate on the head and thorax, rather deeply so on the elytra, on which are little elevated distinct tufts of obscure brown hairs, especially towards the apex and the outer margin, and disposed somewhat in rows: antennæ and legs brown-castaneous, the latter of the deepest cast, and the club of the former dusky: tibiæ broad, finely denticulate, with some few tufts on the margin, similar to those on the elytra.

Taken, about May, 1823, near Ashburton, in Devonshire, by Dr. Leach; and subsequently, “rather plentifully under the bark of some old elm-trees, which were placed in the sand to arrest the incursions of the tide, at Southend.”—*Rev. F. W. Hope*.

#### GENUS CLXXIX.—BYRRHUS *Auctorum*.

*Antennæ* shorter than the thorax, compressed; basal joint large; second small, globose; third long and slender; fourth similar in form, but shorter; fifth rather stouter; sixth globose; the remainder gradually incrassate, and forming an elongate club, the four basal joints of which are transverse-ovate; the terminal one ovate. *Palpi* somewhat equal, subclavate: *head* small, deflexed: *thorax* a little sinuated behind: *body* globose-ovate, above very convex, densely pubescent: *breast* and *abdomen* with impressed foveolæ for the reception of the *legs*, which are short: *femora* and *tibiæ* compressed, dilated, the latter slightly serrated, and with a groove on the outer edge to receive the *tarsi*, which are pentamerous.

The insects of this genus when touched, or during repose, contract their antennæ and legs so firmly and compactly to their body, which has excavated grooves formed for their reception, as to appear like a round inanimate ball or lump of earth, the resemblance to which is heightened by their pubescent sombre clothing; they are generally found in gravel and sand pits, beneath turf by the sides of roads, in the spring and early summer months, &c.:—from *Nosodendron* their five-jointed antennæ at once distinguish them,

and from *Simplocaria* their deciduous tomentose body and subclavate palpi.

Sp. 1. pilula. *Oblongo-ovatus, tomentosus, fuscus, elytris vittis interruptis holosericeo-atris.* (Long. corp.  $3\frac{1}{2}$ — $4\frac{1}{2}$  lin.)

By. pilula. Linné.—*Samouelle, pl. 2. f. 3.*—*Steph. Catal. 97. No. 1029.*

Oblong-ovate; head clothed with a fuscous pubescence: thorax fuscous-black, variegated with an ashy-red pubescence: elytra very obsoletely striated, clothed with an ashy-brown down, the alternate interstices adorned with interrupted black silken stripes: body beneath deep shining black, thickly and deeply punctulate: legs and antennæ black.

Var.  $\beta$ . *Steph. Catal. l. c.*—Black, with the pubescence worn off, leaving the darker stripes on the elytra alone remaining; the thorax obscurely clouded.

Var.  $\gamma$ . *Steph. Catal. l. c.*—Rather less, with the stripes on the elytra ferruginous, and the pubescence more glossy.

Some examples are almost totally black, and others have the interrupted black stripes distinctly spotted with white.

Extremely abundant throughout the metropolitan district; common also near Dover, Brighton, in the Isle of Wight, &c.; also in Norfolk and Suffolk. “Devonshire, common.”—*Dr. Leach.* “York and Newcastle.”—*W. C. Hewitson, Esq.* “Bottisham, &c., not uncommon.”—*Rev. L. Jenyns.* “Common on the sandhills (near Swansea), and almost every where.”—*L. W. Dillwyn, Esq.* “Epping.”—*Mr. Doubleday.* “St. Nicholas, Harraby, &c.”—*T. C. Heysham, Esq.*

Sp. 2. Dennii. *Oblongo-ovatus, ater, aureo-pubescens, thorace maculis duabus rotundatis anticè, duabus angulatis posticè nigris, elytris vittis quatuor longitudinalibus, fasciâque transversâ nigris.* (Long. corp. 4 lin.)

By. Dennii. Kirby MSS.—*Curtis, iii. pl. 135.*—*Steph. Catal. 98. No. 1030.*

Oblong-ovate; black, clothed with a pale golden-pubescence: thorax with two large round black spots in front, and two irregular angulated ones behind: elytra with four longitudinal interrupted black stripes, and a broad sinuated, abbreviated, black, transverse fascia in the middle of the back; the margin dusky: body beneath dull black: legs and antennæ dull pitchy-black.

Slightly variable: the markings being less evident in some examples than in others.

Rare: twice taken on Hampstead-heath, and once found, in the spring of 1821, in a chalk pit at Barham, by Mr. Denny; it may be only a variety of the foregoing: its chief distinction consisting in the disposition of the coloured patches of the pubescence.



Sp. 3. *fasciatus*. *Brevior, ovatus, niger, tomentosus, elytris vittis interruptis, fasciâque mediâ arcuatâ abbreviatâ rufo-ferruginâ.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

By. *fasciatus*. *Forster.*—*Steph. Catal.* 98. No. 1031.

Short, ovate, black, tomentose: thorax clouded with aureous: elytra with interrupted black stripes, and a duplex, arcuated, abbreviated, rufo-ferruginous fascia in the middle, somewhat resembling the figure of a crown.

Var.  $\beta$ . *Steph. Catal. l. c.*—Fuscous or black, elytra in the middle with a common duplex abbreviated fascia, composed of confluent whitish dots.

Var.  $\gamma$ . *Steph. Catal. l. c.*—Head with a fuscous pubescence, with three black streaks; elytra with four longitudinally interrupted black streaks, a common subannular whitish spot, and some dots of the same.

Very variable in colour; sometimes nearly black, immaculate.

Differs from the two preceding in being shorter, but not narrower, with the pubescence more glossy and brilliant, especially towards the sides and apex of the elytra.

Less common than By. *pilula*, though far from uncommon throughout the metropolitan district; in Suffolk, Norfolk, Devonshire, &c. “On the sand-hills (near Swansea), not common.”—*L. W. Dillwyn, Esq.* “Newby Cross.”—*T. C. Heysham, Esq.*

Sp. 4. *oblongus*. *Oblongo-ovatus, piceo-ater, thorace immaculato, elytris vittis tribus interruptis atris, maculisque aliquot albis.* (Long. corp. 4 lin.)

Byr. *oblongus*. *Sturm.*—*Steph. Catal.* 98. No. 1032.

Oblong-ovate, pitchy-black, clothed with a fuscous-brown pubescence; the thorax immaculate: elytra with three interrupted black streaks and several distinct white spots, forming two transverse waved fasciæ: body beneath and legs black or brownish.

This differs from By. *fasciatus* in being more oblong, and in having the thorax immaculate, the elytra less distinctly striped, and having larger and more evident white spots, which are differently disposed, the rows of spots being subparallel with each other, which is not the case in the insect last named.

Found occasionally within the metropolitan district: on Hampstead-heath, Wimbledon-common, &c.

Sp. 5. *dorsalis*. *Brevior, ovalis, ater, thorace literis elytrisque maculâ communi mediâ ferrugineis.* (Long. corp.  $3-3\frac{1}{4}$  lin.)

By. *dorsalis*. *Fabricius.*—*Steph. Catal.* 98. No. 1033.

Short, oval, black, the thorax with ferruginous patches: elytra striated, with the alternate interstices clothed with a black pubescence; and in the middle of the back an unequal short transverse ferruginous fascia common to both elytra, edged on each side with whitish or ashy: body deeply punctured beneath.

Var.  $\beta$ . *Steph. Catal. l. c.*—Black, the elytra with a double transverse series of

whitish spots, more or less obsolete: the thorax immaculate:—excepting in size, and the presence of the transverse ferruginous dorsal fascia on the elytra, this variety somewhat resembles the preceding species.

The transverse dorsal stripe on the elytra at once distinguishes this species.

Not uncommon in sandy and gravelly places near London: also found in other parts. “Martlesham-heath, in June.”—*Marsham MSS.* “On the sand-hills (near Swansea), not common.”—*L. W. Dillwyn, Esq.*

Sp. 6. *sericeus. Ovatus, niger, supra æneus, elytris striatis viridibus, interstitiis alternis nitidioribus nigro-tessellatis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Cis. *sericea. Forster.*—Byr. *sericæus. Steph. Catal.* 98. No. 1034.

Ovate, black, above bronzed or greenish; clothed with a rusty-brown pubescence, which is slightly variegated on the thorax: elytra striated, green or bright bronze, the alternate interstices more brilliant and tessellated with black: legs and antennæ black.

Var.  $\beta$ . *Steph. Catal. l. c.*—With the head, thorax, and elytra of a dull obscure blackish-bronze, immaculate: body piceous beneath.

Var.  $\gamma$ . *Steph. Catal. l. c.*—With the abdomen and base of the femora rufous.

Frequent in the sand and gravel pits of the metropolitan district. “Taken once at Bottisham.”—*Rev. L. Jenyns.* “On the sand-hills (near Swansea); sometimes very plentiful about the beginning of summer on Crwmllyn Burrows.”—*L. W. Dillwyn, Esq.* “New Walk, York.”—*W. C. Hewitson, Esq.* “Epping.”—*Mr. Doubleday.* “Aiket Gate.”—*T. C. Heysham, Esq.*

Sp. 7. *fuscus. Ovatus, niger, elytris striatis fuscis obscuris, maculis obscurioribus.* (Long. corp.  $2\frac{1}{2}$  lin.)

Cis. *fusca. Marsham.*—Byr. *fuscus. Steph. Catal.* 98. No. 1035.

Ovate, black, or dull fuscous: the thorax shining and thickly punctulated: the elytra striated, obscure fuscous, with very obscure spots on the alternate interstices: antennæ and legs fuscous.

Closely allied to the following, of which it may be a variety, and from which it chiefly differs in colour.

Once taken near London by myself; and according to Marsham near Holt, in Norfolk, by Mr. Skrimshire.

Sp. 8. *murinus. Ovalis, fuscus, subtilis niger, elytris vittis atris interruptis, strigisque duabus mediis cinereo-punctatis.* (Long. corp.  $2$ — $2\frac{1}{2}$  lin.)

By. *murinus. Fabricius.*—*Steph. Catal.* 98. No. 1036.

Oval, fuscous, clothed with a griseous pubescence: thorax varied with griseous: elytra very faintly striate, punctate, rusty-fuscous, with three black silken

abbreviated stripes on each, and a double series of white spots in the middle of the back, forming a transverse waved striga: body beneath and legs dusky-black, sprinkled with rigid cinereous hairs.

The colour varies slightly, some examples being of a brighter or ferruginous hue.

The smallest species of the genus: known by its mouse-like colour, and the duplex transverse dorsal striga of white spots on the elytra.

Rare in England: it has been taken within the metropolitan district; but it appears to be more abundant in Norfolk. "Beachamwell, Norfolk."—*J. Scales, Esq.* "Cobham."—*A. Cooper, Esq.* "Martlesham-heath, Suffolk, by the *Rev. R. Sheppard.*"—*Marsham MSS.*

#### GENUS CLXXX.—SIMPLOCARIA, *Marsham MSS.*

*Antennæ* longer than the thorax; basal joint robust, elongate; second less robust, subconic; third slender, elongate, subclavate; fourth and fifth of equal length, short, subovate; sixth rather short, the remainder forming an elongate gradually incrassated club, the four basal joints of which are transverse, the terminal very large, ovate. *Palpi* with the terminal joint ovate-acute: *head* very convex: *thorax* rounded behind: *body* globose-ovate, scantily clothed with a fine pubescence: *legs* rather elongate, slender; *femora* slightly compressed: *tibiæ* a little dilated and bent, simple, without grooves to receive the *tarsi*, which are somewhat elongate, and pentamerous.

*Simplocaria* consists of a group of small species, which may be known from the *Byrrhi* by the comparative nudity of the body, which is usually very shining, the acuteness of the terminal joint of the palpi, the greater length of the antennæ, the slenderness and simplicity of the legs, which are imperfectly contractile, the tibiæ not having grooves to receive the tarsi:—the species frequent grassy situations, beneath the bark of trees, &c.

Sp. 1. concolor. *Ovata, nigra, nitida, elytris punctato-striatis.* (Long. corp.  $1\frac{1}{2}$  lin.)

By. concolor. *Sturm. D. F. ii. 109. pl. xxxv. f. a. A.*

Ovate, deep shining black, with a faintly bronzed, glossy, very slightly pubescent body; elytra rather deeply punctate-striate, the striæ reaching to the apex, and the interstices very finely but distinctly punctured; thorax the same: head impunctate: legs and antennæ black.

Distinguished by its deep black colour, broader form, and nearly glabrous body:—it differs in the latter respect from the other species of the genus, and also by having the penultimate joint of the tarsi obscurely bilobed.

Found beneath masses of chalk, near Dover, and also in the vicinity of Bristol.

Sp. 2. semistriata. *Oblongo-ovata, piceo-nigra, pubescens, antennis pedibusque pallidis, elytris basi tenuè striatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

By. semistriatus. Illiger.—Si. semistriata. Steph. Catal. 99. No. 1037.

Oblong-ovate, pitchy-black, pubescent: head punctured: thorax somewhat æneous, punctured, clothed with cinereous pubescence: elytra also somewhat æneous, attenuated towards the apex, thickly punctured, with a scattered ashy pubescence, with a single entire stria at the suture, and several abbreviated ones at the base, vanishing before the middle: legs and antennæ pale rufescent.

The pale rufescent legs and antennæ of this species, with the abbreviated striæ on the elytra, distinguish this from the foregoing species, and the latter character from the following.

Not uncommon in Battersea-fields, and in other places in the vicinity of London, at the roots of grass. "Common in putrid fungi in woods (near Swansea), and is often rather plentiful about the beginning of summer, in Crwmllyn Burrows."—*L. W. Dillwyn, Esq.* "Glanville's Wootton."—*J. C. Dale, Esq.*

Sp. 3. picipes. *Oblonga, nigro-subænea, nitida, pedibus rufis, elytris profundius continuè striatis.* (Long. corp.  $1\frac{1}{2}$  lin.)

By. picipes. Olivier.—Sim. picipes. Steph. Catal. 99. No. 1038.

Oblong, of a somewhat æneous black: head æneous: thorax clothed with griseous pubescence: elytra elongate, acuminate at the apex, regularly striated, each elytron with ten rather deep, scarcely punctate, striæ, reaching nearly to the apex, the interstices minutely punctate: legs and antennæ rufo-testaceous. As long, but not so broad, as the foregoing species; from which it also differs in having the striæ on the elytra produced nearly to the apex of the latter.

Less common than the last; I have taken it in the neighbourhood of London, and it has been sent to me from the vicinity of Bristol. "On Crwmllyn Burrows, not uncommon."—*L. W. Dillwyn, Esq.*

### FAMILY XXIII.—HISTERIDÆ, Leach.

*Palpi* filiform, short, unequal: *maxillæ* furnished within with an arcuated claw: *mandibles* exposed: *antennæ* abruptly clavate, geniculated; the basal joint often nearly half their length, incurved and slightly thickened towards the apex; the club generally triarticulate: *head*, small, deflexed, contractile, deeply inserted in the *thorax*; the latter transverse, emarginate anteriorly: *sternum* much dilated anteriorly: *breast* large: *body* subquadrate, obtuse, glabrous, in general

depressed: *elytra* truncated at the apex, leaving the extremity of the abdomen exposed; the lateral margin inflexed: *wings* ample: *legs* robust, contractile: *tibiæ* compressed, externally dentate: *tarsi* short, filiform, terminated by two stout contractile *claws*.

The Histeridæ differ from the insects of the foregoing family, to which they are evidently allied, by their geniculated antennæ, which are generally terminated by a nearly solid triarticulate club, and by their abbreviated elytra:—they inhabit various decaying substances, occurring in dead animals, dung, putrid fungi, beneath the bark of decayed or dead trees, &c., occurring chiefly in the spring and summer; they walk slowly, and when touched become immoveable, contracting their legs and antennæ like the Byrrhidæ: they fly, however, with rapidity.

The following are the indigenous genera, as proposed by Dr. Leach in the Zoological Miscellany:

Corpus	{	crassum, subglobose-convexum. <i>Sternum simplex.</i> <i>Elytra</i>	{	haud sulcata:	181. ABRÆUS.	
				sulcata:	182. ONTHOPHILUS.	
	{	depressum. <i>Tibiæ</i> <i>4-posticæ</i>	{	duplici serie spinosæ:	183. HISTER.	
			{	simplici serie spinulosæ. <i>Corpus</i>		
				{	subconvexum:	184. DENDROPHILUS.
				{	planum:	185. PLATYSOMA.

#### GENUS CLXXXI.—ABRÆUS, Leach.

*Antennæ* with the basal joint moderately elongated; the second and third subcylindric; the latter less robust; the fourth short; the three following subglobose, and nearly equal; the eighth lenticular-subglobose; the three terminal ones forming a short-ovate club: *head* convex, retractile, deflexed: *thorax* rather narrowed anteriorly: *body* short, robust, subglobose, not sulcated above: *sternum* not dilated anteriorly: *legs* elongate, slender: *tibiæ* straight, slender, the anterior somewhat triangular, all simple: *tarsi* long and slender.

The Abrai are the most minute insects of the present family, and may readily be known by their more or less globose form, truncate, unsulcated, elytra, slender and simple tibiæ, and by the structure of the antennæ:—they inhabit rotten wood and vegetable refuse.

Sp. 1. globosus.—*Globosus, rufo-piceus subtilissimè punctatus, tibiis anticis in medio triangularitè dilatatis.* (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

Hi. globosus. *Ent. Hefte.*—Ab. globosus. *Steph. Catal.* 99. No. 1042.

Globose, rufo-piceous, finely punctate: thorax convex, much narrowed anteriorly; elytra very convex, nearly as long as the abdomen, with the apex distinctly truncate and the disc delicately punctate: legs with the four posterior tibiæ linear and slender, the two anterior triangularly dilated, all simple.

Somewhat larger, more globose, and of a brighter hue than the following, from which it also differs in the form of the anterior legs, and in being distinctly punctate above.

Not common: found occasionally in hot beds, or beneath rotten garden refuse, in the vicinity of London. “Netley.”—*Rev. F. W. Hope.* “Norwich.”—*Dr. Leach.*

Sp. 2. minutus. *Subrotundus, piceus, nitidus, tibiis omnibus linearibus.* (Long. corp.  $\frac{1}{3}$ — $\frac{1}{2}$  lin.)

Hi. minutus. *Fabricius.*—Ab. minutus. *Steph. Catal.* 99. No. 1043.

Nearly round, piceous, shining, very smooth, but with a very powerful lens obsoletely punctured: head rounded: thorax convex, slightly narrowed anteriorly: elytra moderately convex, with the sides dilated, shorter than the abdomen, with the apex obliquely truncate: legs with all the tibiæ linear, the anterior curved and a little dilated externally.

The minute size of this species, united to its smooth impunctate surface, and simple tibiæ, distinguish it from the preceding.

Much more abundant than the foregoing species, frequenting the same haunts. “Near Swansea.”—*L. W. Dillwyn, Esq.* “Woodland, Devon; Chelsea, Norwich, &c.”—*Dr. Leach.*

## GENUS CLXXXII.—*ONTHOPHILUS, Leach.*

*Antennæ* with the basal joint long, robust, subclavate; second subglobose; third elongate, slender; five following very short, somewhat moniliform or subglobose; the remainder forming an ovate-globose club. *Palpi* slender: *head* small: *thorax* subtrigonal, sulcate: *elytra* also sulcate: *body* subquadrate, robust: *sternum* simple: *legs* long; *tibiæ* long, slender, compressed: *tarsi* slender, the four basal joints subequal.

The genus *Onthophilus* is rendered conspicuous, by the deep longitudinal sulci which adorn the upper surface of the body, by which they may be instantly recognized from the other genera of this family, exclusively of their other characters, which are fur-

nished by their antennæ, form of body, &c.:—the species inhabit dung.

Sp. 1. *striatus*. *Ater*, *thorace elytrisq; lineis elevatis sex, antennis nigris, capitulo fusco*. (Long. corp.  $\frac{3}{4}$ —1 lin.)

Hi. *striatus*. *Forster*.—On. *striatus*. *Steph. Catal.* 100. No. 1044.

Deep black, slightly shining: head and thorax broad, with four elevated lines in the middle, and two abbreviated ones on each side at the base: elytra with the suture and six distinctly elevated lines; the interstices delicately striated and obsoletely punctate: breast and abdomen thickly and deeply punctate: antennæ and legs black, the club of the former dusky.

Much less than the following, and differs not only in the sculpture of the upper surface, but also in the colour of the antennæ.

Common in Battersea-fields, and in other places within the metropolitan district. “Netley, abundantly.”—*Rev. F. W. Hope*. “In horse and cow dung, not uncommon (near Swansea).”—*L. W. Dillwyn, Esq.* “York and Newcastle.”—*W. C. Hewitson, Esq.* “Dalston, Rockcliff, and Common.”—*T. C. Heysham, Esq.*

Sp. 2. *sulcatus*. *Ater*, *obscurus, thorace lineis elevatis quinque, elytris tribus, interstitiis punctatis, antennarum capitulo subferrugineo*. (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Hi. *sulcatus*. *Fabricius*.—On. *sulcatus*. *Steph. Catal.* 100. No. 1045.

Dull black: head and thorax punctate, the latter with five elevated lines, the central one furcate before and channelled at the base: elytra with the suture and three lines on each very much elevated, the interstices with four finely elevated ridges, the alternate ones sparingly punctate: breast and abdomen punctate: mouth and antennæ dull ferruginous, the basal joint of the latter black: legs pitchy-black.

Larger than the foregoing, from which it differs in having five elevated lines on the thorax and three only on the elytra; it also differs in sculpture and colour.

Rare: it has been taken in several parts of Norfolk, and in the west of England. “Kingsbridge, Devon.”—*Dr. Leach*.

## GENUS CLXXXIII.—HISTER *Auctorum*.

*Antennæ* shorter than the thorax, with the basal joint very large, robust, incurved, and incrassated at the apex, which is emarginate; the second slender, recurved, larger than the two following, which are short obconic; the four next very short, transverse, the seventh and eighth being broadest; the remainder forming a subglobose, compressed, triarticulate, club. *Palpi* short, filiform, unequal, with the terminal joint elongate, subfusiform, truncate: head small: thorax transverse, deeply emarginate anteriorly: elytra con-

siderably abbreviated: *body* convex above: *sternum* dilated anteriorly: *legs* short: *femora* compressed, simple: *tibiæ* much compressed; the four posterior furnished with two series of spines: *tarsi* short, simple.

The genus *Hister*, which from the species feigning death when alarmed have been termed Mimic beetles, differs from the other genera of this family by having two series of spines on the four posterior tibiæ, combined with a considerable convexity of body, slightly narrowed thorax anteriorly:—from *Dendrophilus*, by having the antennæ differently constructed, the second joint being curved, and the seventh and eighth very short and broad, &c.:—the species inhabit dung, dead animals, rotten vegetable matter and refuse of all kinds.

A. With the elytra striated; the external striæ entire.

a. With two longitudinal striæ on the sides of the thorax.

1. The elytra with a marginal stria.

Sp. 1. Marshami. PLATE xviii. f. 5.—*Elongatus, subdepressus, ater, nitidus, elytris striis quatuor integris, tibiis anticis tridentatis, posticis spinosissimis.* (Long. corp.  $3\frac{1}{2}$  lin.)

Hi. Marshami. *Steph. Catal.* 100. No. 1046.

Elongate, deep, very glossy, black: head and thorax impunctate, the former with a slightly curved impressed line on the forehead, the latter with two faint striæ on the margin, the inner one nearly touching the base: elytra elongate, very smooth, with six obsoletely punctured striæ, of which the one nearest the suture is abbreviated anteriorly, being about half the length of the elytra; the four following run the entire length, the first being nearly straight and the others slightly curved; and on the outer angle of the elytra is a sixth abbreviated rather faint impunctate one: exposed segments of the abdomen, especially the anal one, much punctate: legs slightly piceous, with the four posterior tarsi thickly furnished with castaneous spines.

The elongate form of this species, with its dissimilarity of sculpture, and the densely spinose posterior tibiæ, at once point out its distinction from its congeners.

The only example of this insect which I have seen, I obtained from the Marshamian cabinet, in which it was placed as the other sex of *Hi. unicolor*.

Sp. 2. merdarius. *Ater, nitidus, elytris externè quinque striatis, thoracis lateribus punctatis, antennarum clavâ ferrugineâ.* (Long. corp. 3 lin.)

Hi. merdarius. *Ent. Hefte.*—*Steph. Catal.* 100. No. 1047.

Oblong-quadrate, shining black: thorax scarcely narrowed anteriorly; the space between the two lateral striæ thickly punctured: elytra rather deeply striated, the striæ slightly punctate, and the two on each nearest the suture abbrevi-



viated, within the apex a transverse impression; tibiæ very much dilated, the anterior with four teeth, the outer one being bifid and the inner one minute: antennæ with the club ferruginous.

The oblong form of this species, with the punctate space between the lateral striæ on the thorax, and the ferruginous club of the antennæ, at once distinguish it from the others of the genus.

Rare: specimens have been taken near London, and in Herefordshire. "Copenhagen-fields."—*Mr. Ingpen.*

Sp. 3. unicolor. *Ater, nitidus, elytris striis tribus integris externis, tibiis anticis tridentatis, dente extimo bifido.* (Long. corp.  $2\frac{1}{2}$ —4 lin.)

Hi. unicolor. *Linné.*—*Wood*, i. pl. v. *Steph. Catal.* 100. No. 1048.

Somewhat rounded, deep glossy-black: thorax convex, as broad as the elytra behind, but narrower anteriorly and deeply notched; lateral striæ rather faint, the outer one rarely extending beyond the middle of the margin: elytra rather convex above, with the lateral margins much dilated, each with seven subpunctate slender striæ, of which the three nearest to the suture are abbreviated anteriorly, the three next entire, and the outer one again abbreviated; on the shoulder is frequently a faint oblique stria: legs stout; anterior tibiæ externally tridentate, with the outer tooth bifid: antennæ black.

Differs from the two foregoing species by its rounded form, &c. from the following by having three abbreviated striæ on each elytron adjoining the suture, the outer striæ on the thorax abbreviated, and the tibiæ tridentate.

Extremely abundant in the neighbourhood of London, and I believe throughout the kingdom, inhabiting dung, dead animals, the putrid sap of trees, &c. "Netley, Oxford, Southend, &c."—*Rev. F. W. Hope.* "Black Hall."—*T. C. Heysham, Esq.* "Sometimes found (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 4. cadaverinus. *Ater, nitidus, elytris externe quinque striatis, tibiis anticis sex dentatis.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{3}{4}$  lin.)

Hi. cadaverinus. *Ent. Hefte.*—*Steph. Catal.* 100. No. 1049.

Somewhat rounded, glossy-black: thorax convex, obsoletely punctate on the margin, with the lateral striæ deep, and both extending to the base, the outer one somewhat remote from the margin and waved: elytra slightly convex, each with five nearly entire striæ, two abbreviated ones adjoining the suture, and two other obsolete ones at the base, between the two exterior, which are somewhat divided by a humeral callous: anterior tibiæ dilated, with five or six small denticulations on its outer margin.

In form resembling the preceding insect, from which it abundantly differs by the depth and elongation of the thoracic striæ, the integrity of the third stria from the suture, the denticulations on the anterior tibiæ, &c.

Also abundant in Britain, frequenting the same haunts as the last. "Salop, Gloucester, South Wales, Deal, Southend, &c."—*Rev. F. W. Hope.* "Carlisle."—*T. C. Heysham, Esq.* "Com-

mon in Cambridgeshire.”—*Rev. L. Jenyns*. “Common near Swansea.”—*L. W. Dillwyn, Esq.* “York and Newcastle.”—*W. C. Hewitson, Esq.* “Parley-heath.”—*J. C. Dale, Esq.*

Sp. 5. *quadrinaculatus*. *Ater, subnitidus, oblongo-quadratus, thoracis lateribus subparallelis, elytris maculâ lunatâ rubrâ; tibiis anticis tridentatis, extimo integro.* (Long. corp.  $3\frac{1}{2}$ — $4\frac{1}{2}$  lin.)

Hi. *quadrinaculatus*. *Linné*.—*Steph. Catal.* 100. No. 1050.

Oblong-quadrate, black, moderately glossy: thorax large, but very little narrowed anteriorly, the lateral striæ rather faint, the outer one scarcely reaching beyond the middle, the interior entire: elytra depressed on the back, each with four rather faint striæ externally, leaving a broad space very smooth towards the suture; at the base of each elytron a more or less distinct large lunate red spot, frequently occupying the entire shoulder, and extending beyond the middle of the elytra in a curved direction, towards the suture: this spot is often interrupted, forming a lunule at the base, and a rounded spot on the disc, behind the middle, and sometimes the basal spot is divided into two: anterior tibiæ with three stout acute simple dentations externally: antennæ with a ferruginous club.

Differs from the two following in having a marginal stria on the elytra, the latter with four striæ, the anterior tibiæ with the dentations simple, &c.

Apparently not very rare in remote parts of the coast of Kent, and at times in the utmost profusion. “Hister 4-maculatus, of which I had previously taken few specimens, now (1827) covered South Sea Common, so that many were crushed under foot at every step.”—*Lt. Davies, in Loudon's Magazine*. “Deal.”—*Rev. F. W. Hope*. “Herne Bay.”—*Mr. Ingpen*. “Ramsgate.”—*Mr. Stone*.

## 2. The elytra without a marginal stria.

Sp. 6. *sinuatus*. *Ater, nitidus, thorace anticè angustiori, elytris tristriatis, arcâ magno rubro longitudinali, tibiis anticis tridentatis, extimo bifido.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

Hi. *sinuatus*. *Illiger*.—*Steph. Catal.* 100. No. 1051.—Hi. 4-maculatus. *Donovan*, xv. pl. 525.

Somewhat rounded, glossy-black: thorax very smooth, narrowed anteriorly, the exterior lateral striæ scarcely reaching beyond the middle, the interior deep and nearly extending to the base: elytra slightly convex, with three striæ externally, but none on the margin; three faint abbreviated ones at the apex towards the suture, the one nearest the suture longest; on each elytron a large bright red arcuated spot, reaching from the base nearly to the apex, and bending inwards: anterior tibiæ with three stout teeth, the exterior bifid.

The red spot on the elytra varies considerably; in one of my specimens it occupies nearly the entire disc, leaving the suture and apex with an oblong spot in the centre alone black.

The bifid exterior dentation of the anterior tarsi, with the convexity of body, tristriate elytra, and large red spot on the latter, which have three abbreviated striæ at the apex, but none on the margin, distinguish this species from the foregoing.

Not common; I possess a specimen taken on Dartford-heath, and others captured in Devonshire. “Kingsbridge, Spitchweek, Swansea, Worcester.”—*Dr. Leach*. “I have a memorandum that it has been taken in the neighbourhood of Swansea.”—*L. W. Dillwyn, Esq.* “Sandsfield.”—*T. C. Heysham, Esq.*

Sp. 7. *quadrinotatus*. *Ater, nitidus, thorace anticè angustiori, elytris subtristriatis, maculâ humerali alterâque mediâ obliquâ rubris.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

Hi. 4-notatus. *Linné*.—*Steph. Catal.* 100. No. 1052.

Rounded, broad, glossy-black: thorax with the lateral striæ rather deep, reaching nearly to the base: elytra rather depressed, dilated on the margins, with two entire striæ towards the margin on each; and an indistinct imperfect one within, leaving a broad impunctate space between it and the suture; on the shoulder is a subquadrate red spot, and an oblique one on the disc, sometimes united to the former: anterior tibiæ with three teeth, the exterior bifid: antennæ with the tip of the club ferruginous.

From the preceding this species is known by the greater width of body, by having the outer lateral striæ on the thorax continuous, the elytra scarcely tristriated, and the red spots differently placed on the surface.

Also rare: but found in distant parts of the kingdom. “Bristol, and near London.”—*Dr. Leach*.

b. *With one longitudinal stria on the sides of the thorax.*

1. The elytra without a marginal stria.

Sp. 8. *duodecimstriatus*. *Ater, nitidus, elytris striis sex, tibiis anticis tridentatis, dente extimo bifido, antennarum clavâ ferruginel.* (Long. corp. 2 lin.)

Hi. duodecimstriatus. *Paykul*.—*Steph. Catal.* 101. No. 1053.

Shining black, impunctate: thorax with the lateral striæ extending to the base: elytra each with six distinct, punctate, striæ, the five outer ones being equidistant, and the inner one near the suture, and united at the base to the following, having an elliptic space on the disc: anterior tibiæ tridentate, the outer tooth bifid: club of the antennæ ferruginous.

Somewhat resembling the following in sculpture, but differs in being totally black above, with the anterior tibiæ tridentate.

Not very abundant near London; found however throughout the metropolitan district and other parts of the country. “Oxford and Netley.”—*Rev. F. W. Hope*. “In carrion and cow dung, not common (near Swansea).”—*L. W. Dillwyn, Esq.* “Near Bir-

mingham.”—*W. C. Hewitson, Esq.* “Burnham, on sand hills.”—*J. C. Dale, Esq.*

Sp. 9. *bimaculatus*. *Ater, nitidus, subdepressus, thorace anticè utrinque foveolato, elytris sex striatis, posticè extrorsum diagonaliter rubris.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{4}$  lin.)

Hi. *bimaculata*. *Linné.—Steph. Catal.* 101. No. 1054.

Somewhat depressed, shining black: thorax smooth, the lateral stria not touching the base, towards the anterior angle, within the stria on each side, is a rounded impressed fovea: elytra very short, rather depressed, the base interiorly black, the apex diagonally, from the shoulder to the apex of the suture, bright red; on each elytron are six punctate striæ, of which the one near the suture is abbreviated anteriorly: femora black: tibiæ and tarsi ferruginous; the anterior tibiæ quadridentate: antennæ ferruginous.

The depressed form of this species, combined with the distinctly bifoveolated thorax, rufous tipped elytra, quadridentate tibiæ, and small size, distinguish it from its congeners.

Not uncommon throughout the metropolitan district. “Netley and Oxford.”—*Rev. F. W. Hope.* “Common (near Swansea).” *L. W. Dillwyn, Esq.* “Epping.”—*Mr. Doubleday.* “Hillends.” *T. C. Heysham, Esq.*

Sp. 10. *parvus*. *Ater, nitidus, elytris sex striatis, interioribus duabus abbreviatis, tibiis anticis tridentatis, antennarum clavâ ferrugineâ.* (Long. corp.  $2-2\frac{1}{4}$  lin.)

Hi. *parvus*. *Marsham.—Steph. Catal.* 101. No. 1055.

Shining black; thorax with the lateral stria reaching nearly to the base, and with a very short arcuated one at the anterior angle on each side: elytra slightly convex, with six striæ, of which the two interior are more or less abbreviated at the base: legs piceous, with the anterior tibiæ tridentate; the outer tooth broader and bifid: antennæ with the club ferruginous.

The short arcuated striga on the anterior angles of the thorax sufficiently distinguishes this small species, exclusively of its other characters.

Not common; found occasionally in various places within the metropolitan district. “Netley and Southend.”—*Rev. F. W. Hope.* “Not common (near Swansea).”—*L. W. Dillwyn, Esq.* “Bot-tisham.”—*Rev. L. Jenyns.* “Near Birmingham.”—*W. C. Hewitson, Esq.*

Sp. 11. *corvinus*. *Ater, nitidus, antennis pedibusque rufo-ferrugineis, elytris sex-striatis interioribus abbreviatis, tibiis anticis quadridentatis.* (Long. corp. 2 lin.)

Hi. *corvinus*. *Germer.—Gyllenhal, Ins. Suec.* iv. 262.

Glossy-black; thorax with the lateral striæ reaching to the base, where it is slightly recurved: elytra with six striæ, the two inner abbreviated, the one nearest the suture being the longest: legs and antennæ rufo-ferruginous; anterior tibiæ quadridentate.

Resembles the last in size and habit, but differs in having the legs and antennæ rufo-ferruginous, with the anterior angles of the thorax less produced and destitute of the abbreviated curved striæ; the anterior tibiæ are also quadridentate.

More abundant than the last, but apparently rare: I possess specimens captured within the metropolitan district.

Sp. 12. *Nigrita*. *Suboblongus, ater, elytris sex striatis, duabus interioribus abbreviatis, tibiis anticis quinque dentatis, dente extimo bifido.* (Long. corp. 2 lin.)

Hi. *Nigrita*. *Steph. Catal.* 101. No. 1064.

Rather oblong, deep black, slightly glossy: thorax with the lateral line straight and rather approximating to the margin; elytra each with an abbreviated stria next the suture, about half their length, then a second about one-third the length of the former, followed by four entire ones on the disc, the margin without striæ: legs black; the anterior tibiæ with five denticulations, the outer one bifid: antennæ black: mouth piceous.

The want of the marginal stria on the elytra distinguishes this insect from *Hi. carbonarius*, which it somewhat resembles, but the striation of the elytra is different.

Of this insect I possess specimens captured near London by myself, but I know not the exact locality.

## 2. Elytra with a marginal stria.

Sp. 13. *stercorarius*. *Oblongo-ovatus, ater, nitidus, elytris striâ laterali brevissimâ, tribus exterioribus integris, internis tribus abbreviatis, tibiis anticis quadridentatis.* (Long. corp. 2—3 lin.)

Hi. *stercorarius*. *Ent. Hefte.—Steph. Catal.* 101. No. 1056.

Oblong-ovate, black, smooth, very glossy: frontal stria rather deeply punctured: thorax with the lateral stria somewhat remote from the margin and reaching to the base: elytra a little dilated on the sides, the apex of each slightly rounded, each with a small lateral stria, abbreviated at each end, then three entire simple slightly curved ones, and three abbreviated ones within at the apex, the sutural one being the longest: body pitchy-black beneath: breast deeply punctured: antennæ and legs black, the anterior tibiæ much dilated, with four robust teeth, the intermediate stoutest.

The very glossy upper surface of this species, with the brevity of the lateral stria on the elytra, the four-toothed anterior tibiæ, &c., distinguish it from the following.

Not uncommon in the vicinity of London, and I believe in other

parts of the kingdom. “Netley.”—*Rev. F. W. Hope*. “Norfolk.”—*Dr. Leach*. “Taken by Mr. Jeffreys (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 14. neglectus. *Ater, nitidus, oblongo-ovatus, elytris extrorsum striis quinque integris, tibiis anticis quinque dentatis.* (Long. corp. 3 lin.)

Hi. neglectus. *Megerle*.—*Steph. Catal.* 101. No. 1057.

Shining black, oblong-ovate: thorax with the lateral line entire, straight, rather approximating to the margin: elytra rather depressed, with two abbreviated striæ next the suture; the second shortest, then five entire ones, the marginal one being rather flexuous, and rather obsolete anteriorly: legs black, the anterior tibiæ with five obtuse denticulations: antennæ piceous, with the club dusky.

In description this species greatly resembles *Hi. carbonarius*, but from that insect it is abundantly distinct; its form being very dissimilar, oblong-ovate, somewhat depressed, instead of short and subconvex.

Not very common in the neighbourhood of London, but taken occasionally on Hampstead-heath, in Battersea-fields, &c. “Oxford and Netley.”—*Rev. F. W. Hope*. “Cardew Mire.”—*T. C. Heysham, Esq.*

Sp. 15. Leachii. *Ater, nitidus, subconvexus, elytris striis quatuor integris, tribus abbreviatis, tibiis anticis quinque dentatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Hi. Leachii. *Steph. Catal.* 101. No. 1058.

Black, shining, subconvex: thorax with the lateral line abbreviated: elytra slightly convex; each with two striæ towards the suture of equal length, being about half that of the elytra, then four entire ones, and finally an abbreviated one on the margin; the five outer ones sparingly punctate: legs black, with the anterior tibiæ five dentate: antennæ piceous, with the club black.

Differs from the preceding in being subconvex, with the sculpture slightly different, and from the following by having the marginal thoracic line abbreviated, the two abbreviated striæ on the elytra half the length of the latter, and in other less evident characters.

Found, but rarely, near London; also in other parts of the kingdom. “London and Bristol.”—*Dr. Leach*.

Sp. 16. carbonarius. *Ater, nitidus, elytris externè striis quinque integris, foveâ submarginali punctatâ, tibiis anticis 5 vel 6 dentatis.* (Long. corp.  $2-3\frac{1}{2}$  lin.)

Hi. carbonarius. *Ent. Hefte*.—*Steph. Catal.* 101. No. 1059.

Shining black: thorax a little narrowed before, with the lateral stria entire a little curved, and rather distant from the margin: elytra slightly convex, with seven striæ, of which the two nearest the suture are always abbreviated, and the next frequently so; the three following are entire; the seventh on the margin a little flexuous outwardly, anteriorly; and beneath the margin an

oblong deeply and thickly punctate foveæ: antennæ and legs black; anterior tibiæ with five or six acute denticulations.

Variable in colour, being sometimes castaneous-brown.

Differs from the foregoing by being shorter, broader, and more convex, the anterior tibiæ being multidentate, and the striæ on the elytra rather differently disposed.

Very abundant throughout the metropolitan district, and in other parts. "Netley, Oxford, and Southend."—*Rev. F. W. Hope*. "On the sand hills (near Swansea), not uncommon."—*L. W. Dillwyn, Esq.* "Carlisle."—*T. C. Heysham, Esq.*

Sp. 17. *quisquilius*. *Ater nitidus, elytris striis septem, tribus internis abbreviatis, thorace postice utrinque ad angulos foveâ profundâ, tibiis anticis quadridentatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Hi. *quisquilius*. *Steph. Catal.* 101. No. 1060.

Very glossy black: thorax with the lateral stria scarcely extending to the base, and rather remote from the edge; on the posterior margin, towards the angles, a deep rounded fovea: elytra with seven striæ, the three internal abbreviated; antennæ black, with the club dusky: legs black, the anterior tibiæ quadridentate.

The two distinct posterior foveæ on the thorax, with the three abbreviated interior striæ on the elytra, and the quadridentate anterior tibiæ, distinguish this species from the foregoing, which it somewhat resembles in form.

Occasionally found near London, and in other parts of the kingdom. "Bristol."—*Dr. Leach*. "On the sand hills, and under rubbish on the sea-shore (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 18. *Kirbii*. *Ater nitidus, thorace lineâ marginali margine approximante, elytris striis duabus abbreviatis internis, quatuor per paria dispositis externis: tibiis anticis quinque-dentatis, dente extimo bifido.* (Long. corp. 3 lin.)

Hi. *Kirbii*. *Steph. Catal.* 101. No. 1062.

Shining black: thorax with the lateral line not extending to the base, and closely adjoining the margin: elytra slightly convex, with two abbreviated striæ near the suture, four entire ones on the disc placed in pairs, and an abbreviated marginal one: legs and antennæ black: anterior tibiæ with five teeth, the exterior one bifid.

The abbreviated lateral striæ on the thorax, with its very close propinquity to the margin, the paired striæ on the elytra, and the five-toothed anterior tibiæ distinguish this series.

Found near London by myself. "Carlisle."—*T. C. Heysham, Esq.*

Sp. 19. *purpurascens*. *Ater nitidus, convexus, elytris externè quinque-striatis, disco rubris, tibiis anticis quinque dentatis, dente extimo integro.* (Long. corp. 2 lin.)

Hi. *purpurascens*. *Fabricius.—Steph. Catal. 101. No. 1061.*

Convex, shining black: thorax with a deep lateral line extending to the base, and rather close to the margin: elytra subconvex, with a more or less distinct undefined red spot or patch on the disc, sometimes, though rarely, obliterated; and each with five entire striæ, and two inner abbreviated ones: legs and antennæ piceous; anterior tibiæ with five teeth, the outer ones simple.

The red patch sometimes occupies nearly the entire disc of the elytra, and the insect is not unfrequently of a more or less intense castaneous-brown.

Exclusively of the red disc of the elytra, this species may be known by its short, convex form, by the five-toothed anterior tibiæ, the outer of which is simple, by the dissimilar position of the striæ on the elytra, and the integrity of the lateral line on the thorax.

Common in the neighbourhood of the metropolis: in profusion at South Lambeth in April last; and frequently observed in other parts of the country. “Netley, Deal, and Southend.”—*Rev. F. W. Hope*. “Not common (near Swansea).”—*L. W. Dillwyn, Esq.* “Carlisle.”—*T. C. Heysham, Esq.*

Sp. 20. *castanipes*. *Ater, subnitidus, paulò convexus, elytris externe quinque-striatis, pedibus piceo-castaneis, tibiis anticis undulatis.* (Long. corp. 2 lin.)

Hi. *castanipes*. *Kirby MSS.—Steph. Catal. 101. No. 1063.*

Black, slightly glossy, and a little convex: thorax with the lateral line extending to the base, where it is slightly rounded: elytra rather convex, with five anterior simple striæ externally, one parallel with and close to the suture, about two-thirds the length of the elytra, and between it and the outer ones a very faint short one, scarcely a third of the length of the former: legs pitchy castaneous; the anterior tibiæ undulated externally: antennæ ferruginous.

From the former this species differs in having the upper surface entirely black, and the inner striæ on the elytra of very dissimilar length, the anterior tibiæ waved exteriorly, and the legs castaneous.

Taken near London and in Suffolk, but not common.

Sp. 21. *caliginosus*. *Suboblongus, ater nitidus, elytris striis tribus integris, tribus abbreviatis, tibiis anticis quinque-dentatis, dente extimo bifido, antennarum clavâ ferrugineâ.* (Long. corp.  $2\frac{1}{2}$  lin.)

Hi. *caliginosus*. *Steph. Catal. 101. No. 1065.*

Rather oblong, deep, very glossy black: thorax with the marginal line rather deep, punctate, and with an abbreviated bent one on the anterior angle, as



in *Hi. parvus*; at the base and towards the lateral margin are several remote impressed dots: elytra with an abbreviated stria near the suture, then two about half the length of the former and united at the apex, followed by three entire ones, and a short basal one on the margin: legs black: anterior tibiæ with five denticulations, the outer one bifid: antennæ pitchy-black, with the club ferruginous.

Abundantly distinct from all the foregoing species of this section, and may be readily known by having the inner stria on the elytra abbreviated at the base, with the second and third united, and in having a mere rudiment only of an external stria; the club of the antennæ ferruginous, and in its oblong depressed form. This species resembles *Hi. 12-striatus* var.  $\beta$ . Plate i. f. 6. of the *Entomologische Hefte*, which both in form and sculpture appears very different from the var.  $\alpha$ . of the same work, Plate i. f. 7.

Found near London; a single example only.

**B.** Elytra striated, the external striæ abbreviated: thorax without lateral striæ, the margins more or less punctured.

Sp. 22. *nitidulus*. *Ovatus, nigro-subæneus, punctulatus, elytris anticè lævibus, striis quinque obliquis abbreviatis.* (Long. corp. 2—3 lin.)

*Hi. nitidulus. Fabricius.—Samouelle, Plate 2. f. 1. Steph. Catal. 101. No. 1066.*

Ovate, black glossed with brassy, shining: forehead punctate: thorax with the disc very smooth, with the sides broadly and the base narrowly but thickly punctate, and an impression on each side within the anterior margin: the elytra rather convex, with the posterior half thickly and finely punctate, each with five punctate, very oblique striæ, the outer ones shortest, and the space between the third and fifth somewhat rugged: legs pitchy-black, the anterior tibiæ slightly crenate-dentate.

Larger than either of the other species of this section, and known by having the space between the third and fifth striæ on the elytra wrinkled, the wrinkles placed obliquely.

A very abundant species throughout the metropolitan district, and, I believe, in other parts. “Yarmouth and Swansea.”—*Dr. Leach*. “Frequent in carrion (near Swansea).”—*L. W. Dillwyn, Esq.* “Sandsfield.”—*T. C. Heysham, Esq.* “Netley, Oxford, and Southend.”—*Rev. F. W. Hope*. “Plentiful everywhere in Cambridgeshire.”—*Rev. L. Jenyns*. “York and Newcastle.”—*W. C. Hewitson, Esq.*

Sp. 23. *pulcherrimus*. *Ovatus, æneo-ater, punctulatus, thoracis disco nitido, elytris margine maculique sesquialterâ glaberrimis; pedibus piceis.* (Long. corp. 2 lin.)

*Hi. pulcherrimus. Weber.—Steph. Catal. 102. No. 1067.*

Ovate, æneous-black, the latter colour predominating beneath; thorax shining,

with the margin punctate; elytra punctate, opaque, each with the shoulders, apex, and margin, with two discoidal spots, one large, suboval, placed towards the suture, the other shorter, small, external, and towards the base very smooth and very shining; abdomen punctate; legs piceous, punctate.

Known by its æneous tinge, with the disc of the thorax, a large patch on the anterior part of the elytra, and another smaller one adjoining externally, being very glossy and smooth.

Rare: it has occurred on the Welsh coast. "South Wales, near Swansea, by Mr. Millard."—*Dr. Leach*.

Sp. 24. *quadristriatus*. *Ovatus, convexus, ater, creberrimè rugoso-punctatis, thoracis disco elytrorumque plagâ anticâ ovali ad suturam lævissimis, tibiis anticis validè quadridentatis*. (Long. corp.  $1\frac{1}{2}$  lin.)

Hi. *quadristriatus*. *Paykul*.—*Steph. Catal.* 102. No. 1070.

Ovate, convex, bluish-black, very thickly rugose-punctate: thorax with the anterior and lateral margin ruggedly-strigose, the hinder margin punctate, leaving a narrow smooth space behind the middle: elytra with an oval space on the disc towards the scutellum, very smooth and glossy, the rest of the surface extremely, and deeply, rugose-punctate, with four very obsolete abbreviated striae at the base, and a single entire one on the suture, recurved at the scutellum, bounding the smooth discoidal spot, and terminating on its outer edge: legs black, with the anterior tibiae strongly quadridentate.

The very rugose-punctate surface of the elytra, with the obsolete abbreviated striae thereon, combined with the bluish hue, and the strongly denticulated anterior tibiae, characterize this insect.

Decidedly uncommon: it has, however, been captured on several parts of the coast. "Barmouth."—*Rev. F. W. Hope*, and *C. Darwin, Esq.*

Sp. 25. *æneus*. *Ovatus, æneus, creberrimè punctatus, thoracis disco, elytrorumque maculâ baseos duplicatâ lævissimis nitidis, tibiis anticis serratis*. (Long. corp.  $1-1\frac{1}{2}$  lin.)

Hi. *æneus*. *Fabricius*.—*Steph. Catal.* 102. No. 1071.

Ovate, æneous, or blackish, shining: forehead thickly punctured: thorax with the disc smooth, the lateral margins broadly, and the anterior and posterior narrowly, but thickly punctate: elytra broad, with the posterior half and margin very thickly punctate, the humeral callous smooth, and a large very smooth glossy space near the scutellum; parallel with the suture is an entire simple stria, which is recurved at the base, and continued obliquely over the smooth space on the disc, which it divides in two, the outer division being smallest, having a very short rudimentary stria at the base, and bounded by another stria nearly half the length of the elytra, and in the punctate space beyond is an obsolete fourth one, the part adjoining which is singularly strigose-punctate: legs piceous, with the anterior tibiae serrate.

This species is distinguished by having the bright polished space on the elytra, in the region of the scutellum, divided into two unequal areas, the inner of which has an abbreviated stria at the base, and by having the anterior tibiæ serrated.

Not uncommon in the neighbourhood of London: in plenty at Hertford, Ripley, Darent; and at Dover, &c. "In cow-dung and dead birds, frequent (near Swansea)."—*L. W. Dillwyn, Esq.* "Carlisle, Drumbrugh."—*T. C. Heysham, Esq.* "Bottisham."—*Rev. L. Jenyns.* "Oxford, Netley, Southend, &c."—*Rev. F. W. Hope.*

† Sp. 26. conjungens. *Ovatus, nigro subvirescens, elytris apicè tantum punctatis, striis quinque ultrà medium productis.* (Long. corp.  $\frac{1}{2}$  lin.?)

Hi. conjungens. *Paykul Faun. i. 44.*—*Curtis' Guide.*

Black, slightly glossed with greenish-brass; forehead flat, thickly punctured; thorax with the angles rounded, the disc very smooth, the anterior and posterior margins narrowly punctate, the lateral ones broadly so; elytra with the apical half irregularly and not very thickly punctate, the base smooth, each with four deeply punctate, somewhat oblique striæ reaching beyond the middle, nearly to the apex, the inner one distant from the suture, near which is an entire stria recurved at the base and united to the second; on the punctured space between these last at the apex is an indistinct abbreviated punctate stria; legs piceous, with the anterior tibiæ four or five toothed.

The obscure abbreviated stria, between the sutural and adjoining one, at the apex of the elytra, with the more deeply punctate striæ at the base, and their elongation, distinguish this species.

Of this insect I have not seen a specimen, and I am not aware of its locality;—it is introduced as British in the work last referred to.

Sp. 27. maritimus. *Oblongo-ovatus, niger, thorace levissimo posticè tenuè punctato, elytris striis quatuor ultrà medium productis, apicè interno punctato.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Hi. maritimus. *Kirby MSS.—Steph. Catal. 102. No. 1068.*—Hi. variabilis. *Leach MSS.—Steph. Catal. 102. No. 1069.*

Oblong-ovate, deep black, slightly shining and convex: thorax smooth, with the anterior and lateral margins impunctate; the posterior with a narrow edge of impressed dots: elytra with the apex within punctate, each with a punctate stria near the suture, extending to the apex, curved at the scutellum, and descending obliquely across the disc rather beyond the middle, parallel with this last are three other striæ, of which the first is rather longest, and at the base is an obsolete rudiment of a fifth stria; the internal apex of the elytra is rather thickly and coarsely punctate: legs pitchy-black; the anterior

tibiæ with three large and two or three small teeth: antennæ rusty-piceous; the basal joint sometimes blackish.

Var.  $\beta$ . With the space between the arch of the sutural striæ thickly rugose-punctate throughout, especially towards the base, which in var.  $\alpha$  is smooth.

In some examples the legs are black, with castaneous spines; and others have the apex of the elytra piceous.

The impunctate anterior and lateral margins of the thorax at once point out the distinctions of this species.

Not very uncommon on some of the coasts of Britain. "On the coast near Cley, Norfolk."—*Rev. W. Kirby*. "Swansea."—*Dr. Leach* and *L. W. Dillwyn, Esq.* "Southend."—*Rev. F. W. Hope*.

Sp. 28. *semistriatus*. *Convexus, ater, obscurus, thoracis disco postico lævi, elytrorum basi impunctato, striis quinque abbreviatis, apice interno punctato, tibiis anticis subundulatis*. (Long. corp.  $1\frac{1}{2}$  lin.)

Hi. *semistriatus mihi*.

Convex, black, obscure: forehead smooth, with a longitudinal impressed line: thorax very finely punctured on the lateral and anterior margins, with a narrow streak of punctures on the posterior edge, having a smooth patch on the hinder portion of the disc: elytra each with an entire stria at the suture, curved at the base and united to the second, which extends obliquely across to the middle of the disc, and is followed by three other equidistant ones, of which the third is longest, and the space between it and the preceding at the base is rugose; and on the shoulder is a short oblique stria closely approximating to the adjoining one; the apical half of the elytra, except a small patch at the outer tip, is thickly and rather deeply punctate; legs and antennæ pitchy-black.

This species may be known from the others of this division, by having the anterior half of the elytra impunctate, and adorned with four equidistant oblique striæ, reaching to about the middle of the disc, with the space between the third and fourth longitudinally rugose as in Hi. *nitidulus*, from which it differs by its minute bulk, dissimilarity of form, &c.

I possess a single example of this very distinct species, which I obtained from Mr. Millard of Bristol, in the neighbourhood of which city it was captured.

Sp. 29. *metallicus*. *Atro-violaceus, fronte rugosa, elytris apice interno punctatis, extus striis quatuor abbreviatis, suturalique integra, tibiis anticis quadridentatis*. (Long. corp.  $1\frac{1}{4}$  lin.)

Hi. *metallicus*. *Fabricius*.—*Steph. Catal.* 102. No. 1072.

Deep violaceous-black, or greenish: the forehead with two transverse wrinkles: thorax thickly rugose-punctate, with the disc posteriorly alone smooth, elytra from the middle to the interior angle somewhat thickly punctate; leaving the anterior and outer limb smooth; at the base are four oblique, short, striæ, rather deeply punctate, and the inner one is connected to the second by a curved

line: legs black, the anterior tibiæ dilated, with four short teeth; the posterior thickly furnished with acute ferruginous spines.

Var.  $\beta$ . *His. maragdulus*. *Steph. Catal.* 102. No. 1073.—With the upper surface of a rich green, or violaceous.

The four abbreviated equidistant striæ on the elytra of this species, combined with its small size, metallic tinge, and quadridentate anterior tibiæ, are its most evident characters.

Apparently rare; my specimens occurred in Norfolk, near "South Creek."—*Rev. T. Skrimshire*. "Southend."—*Rev. F. W. Hope*. "On the Crwmllyn sand-hills."—*L. W. Dillwyn, Esq.*

Sp. 30. violaceus. *Violaceus, thorace toto punctato, elytris basi striis quinque recurvis apice punctatis*. (Long. corp.  $2\frac{3}{4}$  lin.)

Hi. violaceus. *Marsham*.—*Steph. Catal.* 102. No. 1074.

Ovate, violaceous; thorax with the entire disc punctate, not glabrous: elytra with five recurved striæ at the base, the apex punctate.

From the following species, which has also the entire disc of the thorax punctate, this may be known by its superior size, and by having the striæ at the base of the elytra more distinct:—it may possibly be merely a large and dark variety of that species.

Found in Suffolk. "Taken in sheep carrion on Crwmllyn Burrows, by Mr. Jeffreys."—*L. W. Dillwyn, Esq.*

Sp. 31. virescens. *Ovatus, virescens thoracis superficie totâ elytrorumque limbo punctatissimis, striâ suturali integrâ, humeralibus abbreviatis*. (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Hi. virescens. *Paykul*.—*Steph. Catal.* 102. No. 1075.

Ovate, entirely of a rich shining green: forehead convex, punctate: thorax with the disc entirely and finely punctate: elytra convex, thickly punctate throughout, excepting a small ovate space near the scutellum, which is bounded by a stria parallel with the suture, recurved at the base, and descending obliquely on the disc, and beyond this three very short punctate striæ at the base: body beneath dull green; tibiæ and tarsi piceous.

The totally punctate thorax and bright-green colour of this species are sufficient characters to discriminate it from its allies.

Not very common: found occasionally in the neighbourhood of London; in Copenhagen-fields, Coombe-wood, &c. "Battersea and Norwich."—*Dr. Leach*. "In dung (near Swansea), not uncommon."—*L. W. Dillwyn, Esq.* "On Newmarket-heath, in dead hares."—*Rev. L. Jenyns*.

Sp. 32. rotundatus. *Ovatus, niger, subdepressus undique punctatus, elytris striis quatuor abbreviatis, suturali nullâ*. (Long. corp.  $1\frac{1}{4}$  lin.)

*Dend. rotundatus.* *Steph. Catal.* 102. No. 1077, note.—*Hi. piceus.* *Marsham.*

Ovate, black, a little depressed, and sparingly punctate throughout: forehead convex: thorax scarcely margined, with the entire surface finely punctured: elytra glossy, punctate throughout, the punctures finer and more distinct on the disc anteriorly; each with four oblique abbreviated punctate striae reaching beyond the middle, and a very short one on the shoulder, the inner one recurved, but not descending down the suture.

Smaller than the foregoing, from which, among other characters, it differs in wanting a sutural stria, in having the striae more elongated, in colour, &c.

Rare: I have taken one specimen in the neighbourhood of London, but forget the exact locality. “Swansea and Norfolk.”—*Dr. Leach.*

#### GENUS CLXXXIV.—DENDROPHILUS, *Leach.*

*Antennæ* with the basal joint long, robust, clavate, the second about one-fourth the length of the first, less robust and clavate; four following somewhat moniliform; the two upper larger; the remainder forming an oval, rather solid triarticulate club. *Palpi* unequal, with the terminal joint elongate: *head* small, rounded: *thorax* short, produced in the centre beneath: *elytra* truncate, nearly covering the abdomen: *body* more or less convex: *legs* short: *tibiæ* compressed, the anterior dilated externally, and subserrated; the four posterior less dilated, the outer edge slightly spinulose; *tarsi* contractile, simple.

The typical *Dendrophili* differ from the *Histri* in habit, by inhabiting beneath the bark of dead or decaying trees, though the less typical ones affect the putrid remains of animals and other refuse: they may be known from the insects of the preceding genus by the dissimilarity in the proportions of the articulations of the antennæ, by having the tibiæ dilated and simple, the elytra nearly covering the abdomen:—the genus probably requires subdivision, the insects of the first section differing materially in habit from those of the second, which are intimately allied to those of the next genus, living beneath the bark of trees, as above noticed.

A. With the body considerably elevated, and convex, the elytra striated.

† Sp. 1. *Sheppardi.* *Athro-castaneus, subnitidus, subtilissimè punctulatus, elytris striis obsoletis sex.* (Long, corp.  $1\frac{1}{2}$  lin.)

*De. Sheppardi.* *Kirby MSS.—Curtis, iii. pl. 131.—Steph. Catal.* 102. No. 1076.

“Smooth, not very shining, dull castaneous: head black, minutely punctured; club of antennæ ferruginous: thorax vermiculated and punctured under a high power: scutellum none: elytra minutely and sparingly punctured (ap-

pearing shagreened under a powerful lens), each having one slight and five curved, very shallow, striæ, extending the whole length."—*Curtis, l. c.*

The only example I have hitherto seen of this species was taken by the late Rev. R. Sheppard out of the head of a snake at Nacton in Suffolk, and is in Mr. Kirby's cabinet.

† Sp. 2. Cooperi. *Ater, subnitidus, subtilissimè punctulatus, elytris striis quinque integris externis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Deep black, rather glossy, head sparingly punctate: thorax more thickly and deeply punctate: scutellum minute: elytra rather closely punctured, each with five striæ towards the outer edge slightly vanishing towards the apex, and a sixth very obsolete one at an equal distance from the fifth within, leaving a considerable unstriated space adjoining the suture: legs dull castaneous: antennæ dull pitchy-ferruginous.

Differs from the foregoing in having an evident scutellum, the antennæ totally ferruginous, and the striæ on the elytra deeper, vanishing towards the apex, and in wanting one parallel with the suture.

Of this species I have also seen but one specimen, which was taken at "Cobham, in September last."—*A. Cooper, Esq.*

Sp. 3. punctatus. *Ovatus, niger, obscurus, punctatissimus, elytris striis quatuor abbreviatis, tibiis valdè dilatatis, subcrenulatis.* (Long. corp.  $\frac{3}{4}$ —1 lin.)

Hi. punctatus. *Illiger.*—*De. punctatus.*—*Steph. Catal. 102. No. 1078.*

Ovate, obscure black, thickly punctate: forehead convex, scarcely punctate: thorax finely and closely punctured throughout: elytra convex, with the margin and apex piceous, the entire surface rather deeply and thickly punctate, with four obsolete, slightly bent, striæ at the base, of which the two exterior reach nearly to the apex, the others to about the middle: body pitchy beneath: legs pitchy-red, with all the tibiæ, especially the anterior, much dilated externally, and finely crenulated: antennæ ferruginous, with the base obscure.

Larger and broader than the following, and known by having all the striæ on the elytra abbreviated, and the entire surface thickly punctate throughout.

In April, 1813, I found a single example of this species—which seems rare—crawling up the venerable structure of Waltham Cross: the only individual I have ever seen alive. "Norwich, by the late J. Hooker, Esq."—*Dr. Leach.*

Sp. 4. pygmæus. *Nigro-piceus, lævis, elytrorum striis quatuor obsoletis, utrinque abbreviatis, tibiis dilatatis integerrimis.* (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

Hi. pygmæus. *Fabricius.*—*Di. punctatus.*—*Steph. Catal. 102. No. 1079.*

Very convex; above smooth, pitchy-black or obscure castaneous: thorax immarginate, angulated posteriorly, narrowed and deeply emarginated anteriorly: elytra dilated, with four obsolete impunctate striæ externally, neither ex-

tending to the base nor to the apex: body piceous beneath: legs rufo-ferruginous, with all the tibiæ compressed, much dilated externally, and entire. Differs from the next by being of a darker hue, with four striæ only on each elytron—the marginal one being obliterated—and by having the tibiæ dilated.

Not very uncommon near London; frequenting sandy or gravelly situations, such as the sand-pits on Hampstead-heath, and the gravel-pits at Coombe-wood, where it has been taken in plenty, especially at the latter place in the spring: it also occurs in Norfolk and near Bristol.

Sp. 5. piceus. *Rufo-piceus, lævissimus, elytris striâ marginali quatuorque dorsalibus utrinque abbreviatis impunctatis, tibiis angustis subinermibus.* (Long. corp.  $\frac{1}{2} - \frac{3}{4}$  lin.)

Hi. piceus. *Paykul, Mon. Hist. 81. pl. 7. f. 7.—De. seminulum. Steph. Catal. 102. No. 1079.*

Above deep rufo-piceous, very smooth and shining: head rounded; forehead rather flat: thorax deeply emarginate anteriorly, with the sides rounded and narrowly margined, the base slightly bisinuated: elytra dilated, nearly gibbous, each with five very faint impunctate striæ, the marginal one longest, extending from the base to beyond the middle, the dorsal ones shorter and abbreviated at both ends: body pale, rufo-piceous beneath; with the sides finely punctate, the middle smooth: legs pale reddish, with the tibiæ slender, sub-linear, and scarcely denticulate.

The elongate marginal stria on the elytra, slender tibiæ, and paler colour, at once distinguish this insect.

Less common than the last, frequenting similar haunts; it is found within the metropolitan district, as well as near Bristol. “Norwich.”—*Dr. Leach.*

B. With the body much depressed and elongate, the elytra scarcely, or not at all, striated.

Sp. 6. flavicornis. *Ovali-oblongus, ater, nitidus, undique punctulatus, antennis flavescentibus, pedibus rufo-piceis.* (Long. corp.  $\frac{3}{4}$  lin.)

Hi. flavicornis. *Herbst.—De. flavicornis. Steph. Catal. 107. No. 1080.*

Oblong-oval, shining, black; forehead somewhat depressed, punctate: thorax with the angles acute, deeply emarginate anteriorly, and thickly punctate throughout: elytra slightly dilated in the middle, the surface entirely punctate, with several very short obsolete rudiments of striæ towards the sides: body pitchy-black: legs pitchy-red; the anterior tibiæ incurved, dilated and somewhat denticulate outwardly: antennæ flavescent, with the club pale.

Smaller, less convex, rather shorter, but scarcely narrower, than the following species.

Rare: few specimens have hitherto occurred in Britain; it is



found beneath the bark of trees. “In Boleti near Bristol, by Mr. Miller.”—*Dr. Leach*. “South Creek, Norfolk.”—*Rev. T. Skrimshire*. “Coombe-wood.”—*Messrs. Waterhouse and Westwood*.

Sp. 7. *picipes*. *Lineari-elongatus, convexus, niger, undique punctatus, antennis pedibusque rufescentibus*. (Long. corp. 1 lin.)

Hi. *picipes*. *Fabricius*.—*De. picipes*. *Steph. Catal.* 103. No. 1081.

Elongate-linear, convex, black; head broad, finely punctate: thorax subquadrate, somewhat truncate anteriorly and posteriorly, the lateral margins parallel, convex above, and thickly punctate throughout: elytra very convex, black, with the margin and apex piceous; the surface delicately punctate throughout: legs rufescent, with the anterior tibiæ dilated and somewhat denticulated anteriorly; antennæ rufescent.

Var.  $\beta$ .? *De. Milleri*. *Leach MSS.*—*Steph. Catal.* 103. No. 1082.—Less elongate in form, and somewhat more depressed, and of a piceous hue.

More elongate and convex than the preceding species, and rather larger.

Also rare in Britain; and, like the preceding species, found beneath the bark of trees. “Near Norwich, by Mr. Paul.”—*Dr. Leach*. “Occasionally found under stones, and among moss on the sand-hills (near Swansea).”—*L. W. Dillwyn, Esq.*—Var.  $\beta$ . “Near Bristol, found in a Boletus by Mr. Miller.”—*Dr. Leach*.

#### GENUS CLXXXV.—PLATYSOMA, *Leach*.

*Antennæ* with the basal joint very long, somewhat recurved at its apex, and abruptly clavate; second, short, straight, less robust, the six following very short, rather slender, gradually increasing in diameter; the seventh and eighth being transverse; the remaining three forming a solid subglobose club. *Palpi* very short: *head* broad, small: *thorax* transverse or equally subquadrate: *body* flat above: *elytra* rather long, truncate: the abdomen with its two terminal segments exposed: *legs* short; *tibiæ* compressed, the outer edge of the anterior pair furnished with a double row of minute serrations, and of the four posterior with small spines, with a groove to receive the *tarsi*, which are simple.

*Platysoma* is distinguished by the great comparative width and flatness of its form, the back being scarcely higher than the sides; it also differs by having the first joint of the antennæ recurved and remarkably clavate, the clava being dilated internally: the second joint is not recurved as in *Hister*, and the six following are gradually shorter, but broader; the eighth being scarcely less in diameter

than the first of the club;—the elytra are more abbreviated than in *Dendrophilus*, and the antennæ are differently constructed:—the species are found beneath the bark of dead and decaying trees, and appear rare in Britain.

Sp. 1. depressa. *Atra, nitida, thorace lateribus subtilitèr punctato, elytris striis tribus integris, suturali nullâ.* (Long. corp.  $1\frac{1}{2}$  lin.)

Hi. depressus. *Fabricius*.—Pl. depressa. *Steph. Catal.* 103. No. 1083.

Deep black, very glossy: forehead excavated: thorax very broad, depressed, with the lateral margin finely punctate: elytra each with three entire striæ on the outer edge, and a fourth abbreviated one within at the apex, and sometimes with the rudiments of a fifth between the latter and the suture: legs obscure pitchy-black, the anterior tibiæ dilated and quadridentate: antennæ ferruginous.

Differs from the following in being more depressed, broader, and by having only four striæ on the elytra.

Rare; found beneath the bark of the oak and beech near London, and in Norfolk. “I have a memorandum that it has been taken under bark (near Swansea).”—*L. W. Dillwyn, Esq.*

‡ Sp. 2. oblonga. *Linearis, subdepressa, atra, nitida, elytris sex striatis, tribus exterioribus integris.* (Long. corp.  $1\frac{1}{2}$  lin.)

Hi. oblongus. *Fabricius*.—Pl. oblonga. *Steph. Catal.* 103. No. 1084.

Linear-elongate, somewhat depressed, shining black: forehead excavated: thorax subquadrate, above a little convex, the disc smooth, the lateral margins thickly and finely punctured: elytra linear-elongate, with the back depressed; each with six striæ, of which the three inner ones are more or less abbreviated: legs pitchy-black; with the anterior tibiæ quadridentate, the posterior bidentate, with the apex bicuspid: antennæ ferruginous.

Known by the six striæ on the elytra, exclusively of its dissimilarity in form, &c.

Very rare: I have hitherto seen but the specimens which are in the British Museum, and which were taken “near Norwich, beneath the bark of trees, by the late J. Hooker, Esq.”—*Dr. Leach.*

## SUBSECTIO II.—LAMELLICORNES, *Latreille*,

Contains such herbivorous Coleoptera as have the antennæ clavate, with the club composed of three or more lamellæ, or pectinations, the legs fossorial, with the tibiæ externally dentate and spinulose, and the tarsi mostly pentamerous.

This division of Coleopterous insects, taken in its fullest latitude,

is very extensive, and contains some of the largest and most conspicuous species of the order; many of which are no less distinguished for their magnitude, than by the very extraordinary forms which they present, from the horn-like and tubercular processes which arm the head and thorax of several: few, however, of these conspicuous insects inhabit Britain, though some of the largest indigenous species belong to this group.

The larvæ have the body long, nearly semicylindric, soft, flexible, rugose, and whitish, composed of twelve rings, with a scaly head, armed with strong mandibles, and with six scaly legs; on each side are nine stigmata: the hinder extremity is more robust, rounded, and nearly always curved under, which causes the animal to walk with difficulty, as, from the curvature of the back, it falls over continually from side to side:—many of them are three or four years before they change to pupa, which they do in an oval cocoon formed of a glutinous substance mixed with the remains of the materials upon which they feed, either in the earth or the decayed trunks of trees: their food is various, some families subsisting upon putrid vegetable remains, others upon vegetables in a living state, as more particularly noticed hereafter.

The Lamellicornes are naturally divisible into two groups, the first of which answers to the Prioceri of Dumeril, and the second to the Petalocera of the same writer: the first group, corresponding with the Lucanides of Latreille, contains only one indigenous

#### FAMILY XXIV.—LUCANIDÆ, *Leach*.

*Antennæ* geniculated, mostly ten-jointed: basal joint very long, subcylindric, the capitulum pectinated or somewhat perfoliated, and consisting of three or four lamellæ: *labrum* indistinct: *maxillæ* setose: *labium* membranaceous, concealed beneath the mentum, with two hirsute pencil-like laciniae: *head* large, exserted; *mandibles*, especially in the males, very large: *thorax* with its hinder margin not very remote from the base of the *elytra*, which latter are as long as, and conceal, the abdomen: *legs*, especially the anterior, generally elongated: *claws* large, with a bifid unguiform process between them.

The insects of this family have, doubtless, considerable affinity with those of the foregoing, as so admirably pointed out by Mr. MacLeay, in the *Horæ Entomologinæ*: their larvæ inhabit the trunks of trees, upon which, or in wood, the imago occurs.

The British genera may be known by the following characters, partly abridged from the delightful work above mentioned.

Antennarum capitulo	{	subperfoliato, quadrilaminato: . . .		187. DORCUS.
	{	pectinato,	4-laminato. { integrum: . . .	186. PLATYCERUS.
			Labium { bifidum: . . .	188. LUCANUS.
			3-laminato: . . .	189. SINODENDRON.

### GENUS CLXXXVI.—PLATYCERUS, *Geoffrey*.

*Antennæ* shorter than the thorax, the basal joint very long and subclavate; second small; the four following transverse, much shorter than the second; the remainder forming a laminated club, the first joint of which is small, the two next of equal size, the terminal very large, subovate. *Palpi* short, with the terminal joint subovate: *mandibles* short, lunate, shorter than the head, obtusely dentate within: *mentum* semioval, transverse: *labium* minute, entire: *head* subquadrate: *thorax* transverse, slightly margined: *body* depressed: *scutellum* small, somewhat triangular: *legs* moderate: anterior *tibiæ* irregularly serrated without, tridentate at the apex: *tarsi* with the four basal joints short.

The genus *Platycerus* may be known from *Dorcus* by the form of the club of the antennæ, and from *Lucanus* by the brevity of the mandibles in both sexes, exclusively of its comparatively minute size, dissimilarity in the palpi, trophi, &c.:—the only indigenous species lives at the roots of trees.

Sp. 1. caraboides. *Cæruleus aut virescens, nitidus, subtus obscurior, elytris creberrimè punctato-striatis.* (Long. corp. 6—7 lin.)

Lu. caraboides. *Linné.*—Pl. caraboides. *Steph. Catal.* 103. No. 1085.—*Curtis*, vi. pl. 274.

Blue or greenish, shining, smooth: head finely and thickly punctured, slightly pubescent; thorax thickly punctured, especially on the sides, which are somewhat sinuated; elytra punctate-striate, the interstices thickly punctured, the punctures somewhat disposed in lines, and rather deep; body dusky, dull, pitchy-black beneath, pubescent; legs piceous; antennæ black; palpi castaneous.

Very rare in Britain: specimens have been taken by Mr. Waring of Bristol, and others in Scotland: it has also occurred near Oxford, and in the west of England.

GENUS CLXXXVII.—DORCUS, *MacLeay*.

*Antennæ* shorter than the thorax, the basal joint about half their length, clavate, second short, slender at the base, clavate; the four following shorter than the second, the last of them being slightly produced in its inner edge, the remainder forming a somewhat perfoliated club, the terminal joint of which is large and semicircular. *Palpi*, *maxillary* elongate: *labial* very short: *mandibles* short, dentate inwardly: *labrum* distinct: *mentum* semicircular: flat, with the anterior margins entire, straight: *labium* bilobed: *head* very broad, transverse: *thorax* with an obscure dorsal channel, slightly margined; the lateral margin straight: *body* depressed; rounded at the sides: *scutellum* triangular, slightly rounded posteriorly: *legs* short, stout: anterior *tibiæ* irregularly serrate externally, intermediate and posterior with a tooth at the outer edge, the apex of all spurred: *tarsi* short.

Dorcus is evidently a distinct genus from Lucanus; and although there is a little external similarity between the indigenous species and the female of Lucanus Cervus, it may be known by the width of the head, the evident labrum, the entire lateral margin of the thorax, the less dilated anterior tibiæ, subperfoliated antennæ, &c.

Sp. 1. parallelipipedus. *Niger, mandibulis longitudine capitis; dente medio elevato, labro late truncato, superficie totâ subtilissimè punctatâ: aut, supernè rugoso-punctatus labro emarginato, capite bituberculato; fœmina.* (Long. corp. 9—14 lin.)

Lu. parallelipipedus. *Linneé*.—*Don.* viii. pl. 264.—Do. parallelipipedus. *Steph. Catal.* 103. No. 1086.

Dull black: head very finely punctured, nearly as wide as the thorax, retuse anteriorly, with the labrum broad, truncate; mandibles stout, acuminate, with an elevated obtuse vertical tooth in the middle: thorax finely punctured on the disc, more thickly so on the lateral margins; elytra scarcely so wide as the thorax, very thickly and finely rugose-punctate. Female with the upper surface rather more shining, closely and deeply rugose-punctate, especially on the head and thorax, the former of which is much narrower than the latter, and has two approximating elevated tubercles on the forehead; the labrum is small, transverse, deeply emarginated and ruggedly punctate; the mandibles are shorter than in the male, with an obsolete not elevated tooth in the middle; thorax more convex.

Found in old decayed trees in the woods about Shooters' Hill, Eltham, Chisselhurst, Birch-wood, &c., and in the neighbourhood of Hertford. "Occasionally, though not frequently, found in various places (near Swansea)."—*L. W. Dillwyn, Esq.* "Common in pollard ash trees, in the neighbourhood of Bottisham and Ely."

—*Rev. L. Jenyns*. "Frostenden, Suffolk."—*W. C. Hewitson, Esq.*  
 "In decayed ash-wood, Allesley and Warwick."—*Rev. W. T. Bree*.  
 "Epping."—*Mr. Doubleday*. "Nottingham."—*J. Marlow, Esq.*  
 "On an old paling in Lord Dudley's park at Himley, near Dudley,  
 August, 1827."—*Mr. Westwood*. "Old Sarum."—*Mr. Inghen*.

### GENUS CLXXXVIII.—*LUCANUS Auctorum*.

*Antennæ* longer than the thorax, the basal joint curved, very long, clavate; second short, subclavate; third longer, subcylindric; fourth and fifth short, subclavate; sixth short, with an acute process within—in the female these five last joints are of nearly equal length and bulk, and transverse—the remainder forming a pectinated club of four nearly equal lamellæ, the outer one being largest. *Palpi*, *maxillary* elongate, slender; the second joint longest: *labial* short, the joints subequal: *mandibles* dentate internally, very large and glabrous in the males: *mentum* broad, transverse: *labium* bifid; *head* broad; in the males broader than the thorax, and margined: *thorax* with a dorsal channel; the lateral margin obliquely truncate posteriorly: *body* somewhat depressed: *scutellum* rounded: *legs* rather long; *anterior tibiæ* dilated, compressed in the female, dentate: *posterior* more or less spinose: *tarsi* long, simple.

The male *Lucani* may be instantly recognized by their gigantic mandibles, which in the indigenous species are furcate at the apex, and more or less considerably dentate within; and the females may be known from the others of the family by the oblique truncation of the lateral margin of the thorax, the broad, dentate anterior, and spinose posterior, tibiæ, small head, with concealed labrum, quadri-laminate club of the antennæ, &c.

Sp. 1. *Cervus*. *Fusco niger, elytris mandibulisque fusco-castaneis*. (Long. corp. ♂ 1 unc. 5 lin.—2 unc. 9 lin.:—♀ 1 unc. 1 lin.—1 unc. 8 lin.)

Lu. *Cervus*. *Linné*.—*Don*, i. pl. 13. ♂—*Steph. Catal.* 104. No. 1087.

Deep fuscous-black, slightly shining, with the mandibles and elytra more or less castaneous; head larger than the thorax, flat above, retuse anteriorly, the margins considerably elevated; mandibles half as long as the body, stout, with the apex bifurcate, a stout elongate acute tooth in the middle within, and several obtuse smaller ones; thorax short, punctulated, the sides angulated and deflexed; elytra with the sides a little dilated, thickly and finely punctulated. Female much less, with the mandibles not larger than the head, the apex acuminate, simple; head much less than the thorax, coarsely and deeply punctured; thorax finely punctured; tibiæ short, stout, anterior compressed.

Var. β. *Steph. Catal.* l. c.—Much less than var. α., with the mandibles bifurcate

at the apex, crenulated in the middle within, the crenulations unequal and variable in number; the head not so large as the thorax, without elevated margins.

Var.  $\gamma$ . With the apex of the mandibles obtuse, subtruncate, not bifurcate, the inner margin with two obtuse denticulations.

The male varies extremely in the dentation and bulk of the mandibles, scarcely two specimens being precisely similar, and every intermediate grade between the two extremes being observable, seems to militate against the opinion of there being more than one species found in this country:—both sexes also vary considerably in size.

This species, which is the largest Coleopterous insect found in Britain, occurs in the utmost profusion in the neighbourhood of Ripley, Cobham, and in other parts of Surry; also at Darenth, Birch-wood, in the New Forest, Devonshire, &c. “I once found a specimen lying dead on the sea-shore (near Swansea), and it had probably been washed up with the tide.”—*L. W. Dillwyn, Esq.* “Has never occurred in Cambridgeshire to my knowledge.”—*Rev. L. Jenyns.* “Epping.”—*Mr. Doubleday.*

#### GENUS CLXXXIX.—SINODENDRON, *Fabricius.*

*Antennæ* much shorter than the thorax; the basal joint about half their length, slightly tumid at the apex; second short, subglobose; the five following short, transverse, the remainder forming a serrated compressed triarticulate club, the joints of which are trigonal-transverse. *Palpi*, *maxillary* with the last joint cylindric-oval; *labial* with the terminal joint very stout: *mandibles* very short, concealed beneath the clypeus: *mentum* narrow, entire, carinated: *head* small, with a horn on the clypeus, elongate in the male: *thorax* dissimilar in the sexes: *body* convex, cylindric: *legs* short: *tibiæ* spinose externally: *tarsi* short, the terminal joint very large.

This anomalous genus has been constantly shifted about by systematic writers, some placing it with the present family, others with *Oryctes* and its allies, but from which however it seems abundantly to differ, and the rather to associate with the *Lucanidæ*, from the other indigenous genera of which it disagrees, by having the body convex, cylindric, the antennæ very short, with the second joint subglobose, and the capitulum composed of three lamellæ only, the mandibles concealed, and the mentum small.

Sp. 1. *cylindricum*. *Nigrum, thorace anticè truncato, quinque dentato, capitis cornû recurvo, posticè fulvo-hirto.* (Long. corp. 6—9 lin.)

Sc. *cylindricus*. *Linné.*—Si. *cylindricum*. *Don. xi. pl. 368.*—*Steph. Catal. 101. No. 1088.*

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N

Black, shining; head depressed, armed anteriorly with a compressed, bent, vertical, obtuse horn, which is clothed behind with a fulvous down: thorax large, very convex, with a few scattered impressions above, anteriorly very retuse, or obliquely truncate, with five teeth, the middle one longest: elytra somewhat rugged, rudely striated, and with coarse rounded impressed spots: body beneath black, with the apex piceous: antennæ rusty-piceous. Female with the horn on the head very short, straight, the thorax scarcely retuse anteriorly, with its surface thickly and very coarsely punctured.

Variable in size and colour; some specimens being piceous; others castaneous or pale ferruginous: the latter being probably immature.

Not very abundant near London; it has been captured on old trees on Hampstead Heath, Muswell Hill, and in the lane leading to Darenth-wood from Dartford Mills. "In abundance near Cheltenham and Plymouth."—*Dr. Leach*. "Not common (near Swansea)."—*L. W. Dillwyn, Esq.* "In decayed ash and willow trees, by no means of unfrequent occurrence near Cambridge and Bottisham."—*Rev. L. Jenyns*. "Kimpton."—*Rev. G. T. Rudd*. "Rose Castle."—*T. C. Heysham, Esq.* "York and Newcastle."—*W. C. Hewitson, Esq.* "Allerby and Warwick, in decayed ash."—*Rev. W. T. Bree*. "Found in profusion in rotten trees on the Castle-hill at Dudley, and recorded by Dr. Booker in his History of Dudley, under the name of *Scarabæus nasicornis*."—*Mr. Westwood*

The second group of the lamellicorn insects is very extensive, though the indigenous species are not very numerous; it corresponds with the section

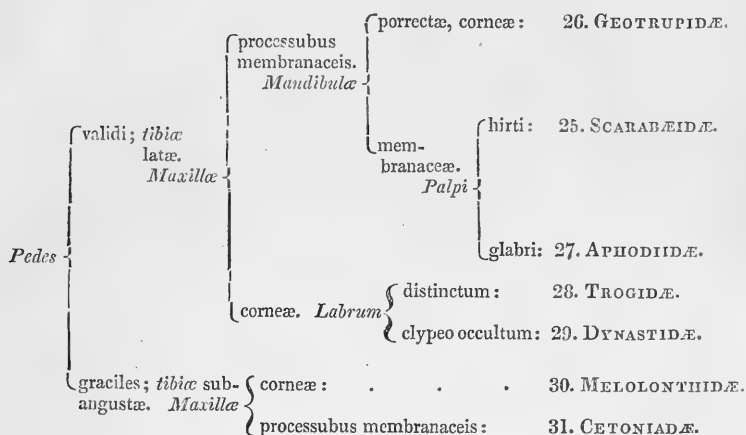
#### PETALOCERA of *Dumeril*:

Their *antennæ* are generally composed of nine or ten joints only, inserted in a cavity on the border of the *head*, the anterior portion of which is generally produced: the *eyes* are placed more beneath than above: the *mouth* varies, but the *labium* is most frequently covered by the *mentum*, which is large and horny: the *anterior tibiæ*, and sometimes the others, are dentate outwardly, and calculated for burrowing: the *tarsi* are always entire: the *body* is in general more or less oval; and, as before mentioned, the head and thorax are frequently armed with horns or tubercles.

The Petalocera subsist entirely on vegetable substances; the greater portion—those of the first five subjoined families—preferring it in a state of decomposition; while the Melolonthidæ devour fresh leaves, and the Cetoniadæ flowers in their perfect state; the latter



insects—the Thalerophaga of MacLeay—are of brilliant and lively colours; while those which feed upon decaying substances—the Saprophaga of the same author—are dusky or black, sometimes with a metallic tinge. The following are the indigenous families, which may be known by these concise characters, abridged from those in the *Horæ Entomologicæ*:



#### FAMILY XXV.—SCARABÆIDÆ, *MacLeay*.

*Antennæ* nine-jointed, the basal joint elongate, cylindric, somewhat attenuated in the middle, the capitulum large triphyllous. *Labrum* concealed beneath the clypeus: *mandibles* membranaceous, hidden, elongate-lanceolate: *maxillæ* crustaceous, with membranaceous processes: *palpi*, *maxillary* subfiliform, naked; *labial* very pilose, the articulations somewhat dilated: *head* somewhat semicircular, frequently dentate, or horned on the clypeus: *thorax* transverse: *scutellum* concealed: *breast* large: *body* orbiculate-ovate, convex or depressed; not wholly covered by the elytra: *legs* stout, intermediate-ovate, distant at the base; posterior placed far behind: *tibiæ* broad, externally dentate: *tarsi*, especially the anterior, small: *claws* minute.

The Scarabæidæ may be distinguished from the Geotrupidæ and Aphodiidæ by their concealed elytra, lanceolate mandibles, and large pectus: they are also remarkable from having the posterior legs placed very far behind, a structure admirably calculated for their peculiar habits of depositing their eggs in little masses of dung, which they roll into balls: they are all copro-

phagus; and the British species may be thus concisely divided into genera.

Corpus	{	convexum: <i>Palpi labiales</i> articulo ultimo minuto:	190. COPRIS.
		depressum: <i>Palpi labiales</i> articulo ultimo	{
	{	securiforme:	
		minuto:	192. ONITICELLUS.

### GENUS CXC.—COPRIS, *Geoffroy*.

*Antennæ* short, the basal joint considerably elongated, subclavate; the three following short, equal in length, subhemispheric; the two next very short, transverse; the remainder forming an abrupt three-jointed club. *Palpi*, *maxillary* elongate, four-jointed; the terminal joint long, attenuated at each end, acute; *labial* short, very hairy, triarticulate, the terminal joint slender, truncate, minute: *head* triangular: *clypeus* emarginate in the centre, and sinuated laterally; armed in the middle with an acute or emarginate horn: *thorax* transverse, considerably shorter than the elytra, retuse and tuberculated, or cornuted anteriorly: *elytra* entire: *body* convex: *legs* stout: *anterior tibiæ* broad, rather curved, tridentate exteriorly: *posterior* bidentate, and bicalcarate at the apex: *tarsi* anterior, slender, and rather short; four posterior longer and dilated, especially the basal joint.

Copris differs from Onthophagus, not only by its greater bulk, but by having the body convex, the terminal joint of the maxillary palpi acute, and of the labial ones minute and slender, the clypeus emarginate anteriorly, the thorax distinctly shorter than the elytra, &c. *C. lunaris* frequents sandy districts, where it burrows obliquely to some depth, for the purpose of depositing its eggs in safety.

Sp. 1. *lunaris*. *Nigra nitida, thorace canaliculato, medio retuso bifido, capitis cornu erecto, in femina emarginato.* (Long. corp. 8—10 lin.)

Sc. *lunaris*. *Linné.—Donovan, v. pl. 154, f. 4.—Co. lunaris. Steph. Catal. 104. No. 1089.*

Shining black, with the outer margin of the clypeus, thorax, and base of the elytra ciliated with castaneous hairs: clypeus semiorbiculate; depressed, deeply emarginate anteriorly, with an erect, elongate, subulate horn in the middle, having its base bidentate within: thorax punctate, with a deep central channel, anteriorly retuse, bilobed, with the sides prominent, acute, the middle broad, truncate, bifid: elytra sulcate.

Female with the horn on the head shorter, emarginate; the thorax scarcely tuberculated.

The length of the frontal horn differs considerably, as do the tubercles or horns on the anterior margin of the thorax; but as every intermediate shade may be readily obtained, all the varieties are doubtless to be referred to this species.

Not uncommon in several places in the neighbourhood of London, and in other parts. "Cliffe, near Gravesend."—*Mr. Bainbridge*. "In plenty in a sandy lane, near Richmond."—*Rev. T. T. Haverfield*. "Has occurred in some plenty in the neighbourhood of Melbourne, Cambridgeshire."—*Rev. L. Jenyns*. "Bristol."—*G. Waring, Esq.*

#### GENUS CXCI.—ONTHOPHAGUS, *Latreille*.

*Antennæ* with the basal joint long, cylindric; the second globose; the four following short, gradually becoming transverse; the remainder forming an abrupt, pubescent triarticulate club. *Palpi*, *maxillary*, with the terminal joint attenuated at each end and truncate; labial very hairy, two-jointed, the apical joint reniform, obliquely truncate: *head* cornute or tuberculated: *clypeus* large, entire, irregularly semicircular: *thorax* broad, as long or longer than the elytra, emarginate and retuse before, rounded behind: *body* depressed: *legs* moderate: *anterior tibiæ* large, strongly dentate externally; *posterior* bidentate at the apex: *tarsi* slender, anterior rather smallest.

The singular genus *Onthophagus* is characterized by having the body depressed, the clypeus entire, or slightly emarginate, the thorax very broad, as long as the elytra, the terminal joint of the maxillary palpi truncate, and of the labial ones securiform, &c.:—the species generally appear toward the end of April, and frequent cow-dung in preference to other pabulum:—they vary extremely both in size and colour, as well as in the length of the various horn-like prominences with which most of them are armed on the clypeus; which latter circumstance has induced some writers to suppose there was an intermediate sex; but as every possible shade of variation in length may be obtained by an extensive collection of specimens, that theory is clearly incorrect.

##### A. With the head cornuated, or tuberculated.

‡ Sp. 1. *Taurus*. *Niger, occipite cornubus duobus reclinatis arcuatis, mas.: aut lincis duabus transversis elevatis, thorace mutico, fœmina.* (Long. corp.  $4\frac{1}{2}$  lin.)

Sc. *Taurus*. *Linné.*—On. *Taurus*. *Curtis*, ii. pl. 52.—*Steph. Catal.* 104. No. 1090.

Black, shining, thorax slightly æneous: clypeus punctured; towards its hinder margin arise two long arcuated reclined horns, which are united at the base by a transverse line: thorax finely punctured, smooth anteriorly, depressed in the centre, and on each side: elytra finely punctate-striate, each slightly pubescent: tarsi and base of antennæ dull ferruginous. Female with two transverse elevated lines on the clypeus.

The only indigenous example of this fine and remarkable species which I have seen is contained in the rich cabinet of Mr. Bentley, who obtained it from that of Mr. Stone. It was captured in October, 1826, in the New Forest, Hants, near Brockenhurst.

Sp. 2. *Vacca*. *Virescenti-æneus, clypeo subemarginato elytris ochraceis, viridi punctatis; occipite lineis duabus elevatis, postice ad angulos laterales utrinque in cornû producta.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

Sc. *Vacca*. Linné.—On. *Vacca*. Steph. Catal. 105. No. 1091.

Greenish-brass, slightly glossy: clypeus slightly emarginate anteriorly, villose, somewhat rugose and punctate, with a slightly lunate transverse carina on the vertex, and a second towards the posterior edge, the last terminating on each side in a short obtuse horn: thorax villose, retuse anteriorly, transversely excavated, with an obtuse lobe in the centre: elytra obscurely striated, ochraceous, very sparingly punctate with greenish, the suture also greenish. Female with the carinæ on the clypeus simple.

On. *Vacca* differs from the following insect by being rather narrower in proportion to its length, in having the posterior carina of the clypeus distinctly shorter than the anterior, with the horn at its extremity larger than in On. medius: the elytra are very sparingly punctate with greenish, and the thorax is more villose.

Rare: it has been taken in Norfolk and Suffolk, but I believe not in the vicinity of London; certainly not in Battersea-fields; the insect said to be there found being On. medius. I have not seen above six indigenous specimens, three of which I possess.

Sp. 3. medius. *Virescenti-æneus, clypeo rotundato, obtuso, subrugoso, elytris griseis, maculis majoribus æneo-nigris confluentibus, occipite spinâ geminâ brevi.* (Long. corp.  $3$ — $4\frac{1}{2}$  lin.)

Co. media. Illiger.—On. medius. Steph. Catal. 105. No. 1092.

Greenish-brass, obscure: clypeus rounded, with the anterior margin reflexed, obtuse, subtruncate, above thickly rugose-punctate throughout, and in the male furnished with a slightly bent carina on the vertex, and a second behind, terminating at each extremity in a short spine, as in On. *Vacca*: thorax bronzed-black, granulated, excavated anteriorly, with a small central glossy lobe: elytra griseous, punctate-striated, with the disc thickly spotted with deep black-bronze clouds, dispersed in longitudinal streaks: body be-

neath and legs brassy-black, dentate, with the laminæ on the clypeus less elevated and more curved, the posterior one scarcely produced into lateral spines; the thorax less excavated anteriorly.

Known from the foregoing, which is the only indigenous species it resembles, by its broader form, deeper clouded elytra, and the greater width of the laminæ on the clypeus.

Not uncommon towards the end of May, in cow-dung, in Battersea-fields: it has also been taken in Epping Forest, and in Norfolk.

Sp. 4. *fracticornis*. *Fusco-æneus*, *clypeo antice productiori thoracis angulis anticis subreflexis*, *elytris luridis fusco-adspersis*: mas, *laminâ occipitis utriusque dentatâ*, *spinâ terminali nutante*: *foemina*, *clypeo lineis duabus transversis*, *anticâ arcuatâ longiori*, *thorace mutico*. (Long. corp. 3—4 lin.)

Si. *fracticornis*. *Preysler*.—On. *fracticornis*. *Steph. Catal.* 105. No. 1093.

Dusky-brassy, pubescent: clypeus of the male anteriorly narrowed, reflexed, and prominent, slightly emarginated, punctate, with an obsolete curved line in the middle and a carina posteriorly, furnished on each side at the base with a denticulation or angle, and the centre produced into an elongate spine bending forwards towards the apex: thorax sometimes bright greenish-bronze, thickly punctulated, excavated in the middle of its anterior edge: elytra very finely striate, lurid-griseous, sprinkled with subconfluent dusky-bronze spots, sometimes a little reticulated, but mostly disposed in lines: body and legs bronzed-black. Female with the clypeus less produced anteriorly, with two elevated lines, the anterior arcuated and rather obsolete: the posterior shorter, unequal: the thorax not excavated in front.

The length of the occipital horn in this, as in the other, species varies considerably; in some examples it becomes nearly obsolete.

Common in the metropolitan district, towards the end of April and during May. "Occasionally found in dung (near Swansea), but rarely on the sea shore."—*L. W. Dillwyn, Esq.* "Neighbourhood of Bottisham."—*Rev. L. Jenyns.* "Netley."—*Rev. F. W. Hope.*

Sp. 5. *cænobita*. *Æneo-viridis*, *elytris rufo-griseis immaculatis aut obsolete viridi maculatis*: mas, *occipit spinâ erectâ*: *foemina*, *clypeo carinis duabus transversis elevatis*. (Long. corp. 3—4 lin.)

Si. *cænobita*. *Fabricius*.—On. *cænobita*. *Steph. Catal.* 105. No. 1094.

Brassy-green, pubescent: male with the clypeus reflexed anteriorly and slightly emarginate; the disc punctate, with an erect spine or horn posteriorly, arising from a transverse carina, and sometimes a little bent forwards: thorax rich green, finely granulated, with an excavation in the middle of its anterior edge: elytra rufo-griseous, rather faintly striated, and usually immaculate,

but sometimes a little spotted with greenish-bronze: body and legs brassy. Female with two transverse carinæ on the occiput, but no spine behind; the anterior edge of the thorax bituberculated in the middle.

Not very abundant in the metropolitan district: I have occasionally met with it on Hampstead-heath and near Hertford, in May; also near Gravesend. "More frequent a little inland (near Swansea) than on the sea shore."—*L. W. Dillwyn, Esq.* "Southwold, Suffolk."—*W. C. Hewitson, Esq.* "Bottisham."—*Rev. L. Jenyns.* "Epping."—*Mr. Doubleday.*

Sp. 7. *Dillwynii*. PLATE XVIII. f. 6.—*Æneo-niger, elytris luridis nigro reticulatis*; mas, *occipite sublævi, vertice carinâ obsoletâ et postice spinâ erectâ*; fœmina, *occipite carinis duabus elevatis*. (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

On. *Dillwynii*. *Kirby MSS.*—*Steph. Catal.* 105. No. 1097.

Brassy-black, slightly pubescent; clypeus in the male rounded in front, and obscurely emarginate in the centre, its margins reflexed, the disc nearly smooth, with an obsolete carina on the vertex, and a distinct elevated one behind, terminating in an elongate slightly nutant horn; thorax finely granulated, excavated in front, with two tubercles towards the middle, and two others on the lateral margins; the anterior angles slightly reflexed; elytra behind more or less reticulated with bronzed black. Female with two arcuated elevated carinæ on the clypeus, the thorax not excavated anteriorly. Known from the following by its deeper hue and the reticulated elytra, as also by its more glabrous aspect and larger size.

This insect occurs chiefly in maritime districts, though it does appear inland. "Not uncommon in the meadows between Gravesend and Cliffe."—*Mr. Bainbridge.* "Not uncommon in

†Sp. 6. *austriacus*. *Niger, clypeo sublævi anticè attenuato, postice laminâ spinosâ, elytris griseis parè nigro irroratis*. (Long. corp.  $5\frac{1}{2}$ —6 lin.)

Sc. *austriacus*. *Schneider.*—On. *austriacus*. *Curtis, folio 52. (!)* *Steph. Catal.* 105. No. 1095.

Obscure black, pilose; clypeus somewhat smooth, attenuated in front, especially in the male, which has an elongate, rounded, slender, carina behind, terminating in an acuminate spine; thorax large, granulated, considerably excavated in front, for the reception of the vertical horn; elytra griseous, obsoletely punctate-striate, with a few irregular black spots between. Female larger, with the clypeus shorter and less attenuated, with two small elevated transverse carinæ; thorax anteriorly excavated, with an emarginate central tubercle.

Introduced as British in the work above referred to, without any authority for its insertion.

dung on the sands by the sea-side, and on the naked sand-hills (near Swansea).”—*L. W. Dillwyn, Esq.* “Neighbourhood of Bottisham.”—*Rev. L. Jenyns.*

Sp. 8. *nuchicornis.* *Æneo-niger, clypeo thoracisque lateribus rotundatis, elytris luridis nigro adpersis: mas, occipite spinâ erectâ, basi dilatâtâ: foemina, clypeo curinis duabus valdè elevatis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Sc. *nuchicornis.* *Linné.*—*Marshall, i. 34.*—*Donovan, viii. pl. 255. f. 2.*—*On. nuchicornis.* *Steph. Catal. 105. No. 1098.*

Brassy-black, pubescent: clypeus suborbiculate, with the margin reflexed; punctulated above, with an arcuated transverse carina in the middle, and a straight acute spine behind, arising from a small dilated carina: thorax granulate-punctate, with the lateral and posterior margins rounded, the anterior angle not reflexed, the front slightly retuse: elytra punctate-striated, lurid-griseous, with irregular, somewhat confluent deep black or bronzed clouds. Female with two much elevated carinæ on the clypeus, the anterior curved, the posterior straight, and more elevated; the thorax anteriorly considerably produced in the middle.

Very variable, as well in size as in colour, and in the length of the occipital horn.

Abundant throughout the metropolitan district. “Common (near Swansea).”—*L. W. Dillwyn, Esq.* “Bottisham.”—*Rev. L. Jenyns.* “Cricket Gate.”—*T. C. Heysham, Esq.* “York and West Dale, Cumberland.”—*W. C. Hewitson, Esq.* “Epping.”—*Mr. Doubleday.*

Sp. 9. *nutans.* *Niger, thorace anticè impresso, occipite spinâ erectâ armato, elytris obsoletè punctato-striatis: foemina, clypeo lineis duabus elevatis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

Sc. *nutans.* *Fabricius.*—*Donovan, viii. pl. 255. f. 1.*—*On. nutans.* *Steph. Catal. 105. No. 1098.*

Black, slightly shining and finely pubescent: clypeus attenuated in front, and considerably reflexed, with an obscure line on the vertex, produced posteriorly into a broad elevated carina, which terminates in an elongate nutant spine: thorax very retuse in front, with a deep excavation to receive the occipital spine: the anterior angles acute and somewhat reflexed, the disc granulated: elytra deep black, faintly punctate-striated. Female with two considerably elevated carinæ on the clypeus: the thorax excavated in front, with a bifid central lobe.

In some parts of the metropolitan district, this species occurs in the utmost profusion, especially in Epping Forest, and also at Darenth, near Birch-wood, Dulwich, &c.; but in others it is some-

what rare. "Armathwaite."—*T. C. Heysham, Esq.* "Epping."  
*Mr. Doubleday.*

B. With the head not armed with a spine or horn.

Sp. 10. ovatus. *Niger, obscurus, clypeo rotundato carinis duabus transversis elevatis, elytris obsolete crenato-striatis.* (Long. corp. 2—2½ lin.)

Sc. ovatus. *Linné.*—*Martyn. pl. 4. f. 36.*—On. ovatus. *Steph. Catal. 106. No. 1099.*

Entirely of an obscure black, pubescent: clypeus nearly orbicular, obtuse anteriorly, and slightly emarginate, with a semicircular, somewhat obsolete carina in the middle, and a second more elevated and shorter one behind: thorax finely punctured, with a slight tubercle in the centre: elytra faintly excavate-striated. Female similar.

Rather local, but found in several places throughout the metropolitan district; as at Darenth, Hertford, Ripley, Charlton, &c. "Very common in the neighbourhood of Bottisham."—*Rev. L. Jenyns.* "Never plentiful (near Swansea), but is occasionally found throughout the neighbourhood."—*L. W. Dillwyn, Esq.*

#### GENUS CXCII.—ONITICELLUS, Ziegler?

*Antennæ* short, with the basal joint short, clavate, the two following somewhat cup-shaped, the three next transverse, the remainder forming a trilamellate club. *Palpi maxillary* short, with the terminal joint subovate: *labial* slightly pilose, with the apical joint minute subulate: *head* small, suborbicular: *thorax* large, somewhat orbiculate, slightly produced in the centre behind, emarginate anteriorly: *elytra* small: *body* depressed: *legs* rather long: *femora* simple: *tibiæ anterior* much dilated, and strongly dentate externally; intermediate and posterior short, especially the former, and slightly denticulated on the outer margin: *anterior tarsi* short, slender; four *posterior* larger and stouter.

‡ Sp. 1. verticicornis. *Thorace griseo nigro punctato, capitis cornu erecto brevissimo.* (Long. corp. 4 lin.)

Sc. verticicornis. *Fabricius (!)*—On. verticicornis. *Steph. Catal. 106. No. 1100, note.*

Black: clypeus rounded, æneous, with a very short recurved horn: thorax rounded, smooth, griseous, with two anterior and one lateral spot, black: elytra smooth, griseous: legs pale.

Introduced as British on the authority of Fabricius, who refers to Mr. Tunstall's collection.



FAMILY XXVI.—GEOTRUPIDÆ, *MacLeay*.

*Antennæ* eleven-jointed, the basal joint elongate, subclavate, the capitulum large, triphyllous and subglobose. *Labrum* exserted, crustaceous: *mandibles* porrect, horny: *maxillæ* crustaceous, with membranaceous processes: *palpi* filiform; *maxillary* naked; *labial* slightly pilose: *head* sometimes cornuted: *clypeus* triangular: *thorax* broader than long: *scutellum* distinct: *body* convex, orbiculate-ovate, or suborbicular: *legs* very stout: *tibiæ* broad, spinose at the apex, the anterior dentate externally; the posterior somewhat dilated at the apex: *tarsi* rather long, slender: *claws* distinct.

The indigenous Geotrupidæ are generally large and conspicuous insects: from the Scarabæidæ they differ by their corneous mandibles, and by their more convex form; they are coprophagous, and excavate deep cylindric holes in the earth under their food: the following genera have been distinguished, and may be known by the annexed concise definitions:

<i>Antennarum articulo secundo</i>	{	tertio longiore:	.	.	.	193. BOLBOCERUS.
		globoso, tertio brevior:	{	cornutus:	.	194. TYPHEUS.
				muticus:	.	195. GEOTRUPES.

GENUS CXCIII.—BOLBOCERUS, *Kirby*.

*Antennæ* rather short, the basal joint elongate, subclavate, very pilose on its inner edge; second large, cup-shaped; the six following short, transverse; the remainder forming a large oval club, the first joint of which is largest, and the terminal smallest. *Palpi maxillary* with the fourth joint considerably longer than the third, subcylindric: *head* small, with an erect occipital horn in the male: *thorax* large, unequal, cornuted in the males, simple in the females: *clytra* short, convex: *body* suborbicular: *legs* rather long: *tibiæ* curved; *anterior* compressed and serrated without; *intermediate* and *posterior* denticulated: *tarsi* long, basal and terminal joints of equal length; fourth smallest.

*Bolbocerus* was first described as a distinct genus from *Geotrupes* by Mr. Kirby, in the Linnean Transactions, although the name *Odontæus* had been previously applied thereto on the continent, but without characters:—the genus may be readily known from the others of the family, by the brevity of the third joint of the antennæ, which is considerably shorter than the second, exclusively

of other evident characters, as the dissimilarity in the proportions of the terminal joints of the maxillary palpi, the cornuted head, unequal thorax, subhemispheric body, &c.

Sp. 1. *mobilicornis*. *Castaneo-niger, subtus testaceus*: mas, *thorace quadridentato, capitis cornû recurvo mobili*. (Long. corp. 4 lin.)

Sc. *mobilicornis*. *Fabricius*.—Bo. *mobilicornis*. *Steph. Catal.* 106. No. 1101. *Curtis*, vi. pl. 259?

Black, sometimes with a chestnut hue, beneath testaceous; clypeus sinuated, punctate, with a long linear, slightly recurved, moveable horn in the middle: thorax deeply punctate, with a groove in the middle, having an acute process on each side, to receive the occipital horn, and two longer, more or less elongate, compressed, bent, processes on each side near the anterior angles: elytra deeply punctate-striated: body beneath testaceous; legs castaneous: palpi and antennæ flavescent, the club of the latter pitchy-chestnut. Female with obsolete rudiments of tubercles on the head and thorax.

Variable in colour, as well as in the length of the occipital horn, but rarely entirely testaceous.

Not common: found in various places within the metropolitan district; specimens having been found at Hertford, Darent, Birch-wood, Dartford, &c.: it has also occurred in Cambridgeshire at Wisbeach, on Moushold heath, near Norwich. “Coombe-wood.”—*Mr. Hatchett*. “A single female in Lord Clifford’s park near Bristol.”—*G. Waring, Esq.*

Sp. 2. *testaceus*. *Rufo-testaceus, oculis nigris*: mas, *capitis cornû brevi arcuato, thorace quadrutuberculato*: foemina, *capite bituberculato*. (Long. corp. 3—3½ lin.)

Sc. *testaceus*. *Fabricius*.—Bo. *testaceus*. *Steph. Catal.* 106. No. 1102.

Less than the last; rufo-testaceous; eyes black: male with a rather short, slightly recurved acute horn on the clypeus: thorax punctate, with a shallow central channel anteriorly, having a minute prominence on each side, and a large tubercle of a triangular form near the anterior angles: elytra punctate-striated. Female with two minute tubercles on the clypeus.

Smaller than the last, with the horn on the clypeus more slender, shorter, less recurved and tapering to its extremity, the armature on the thorax very short, and sometimes nearly obsolete: the eyes black, and the serrations of the anterior tibiae piceous.

I am induced to consider this distinct, from the facts that out of an extensive series that I possess of each species, there are no intermediate specimens; the armature of the head and thorax being in all remarkably short, and the tubercles on the thorax very small, and in some instances obsolete, while all the specimens are considerably smaller than those of Bo. *mobilicornis*; and

Gyllenhal states that the present insect is not found in Sweden, whereas the last species is a native of that country.

I believe all my specimens were taken in Norfolk.

† Sp. 3. quadridens. *Ferrugineus, capitis cornū elevato simplici, thorace antice quadridentato.* (Long. corp. 6 lin.)

Sc. quadridens. *Fabricius.*—Bo. quadridens. *Steph. Catal.* 106. No. 1103.

Much larger than Bo. mobilicornis; ferruginous; male with a short immoveable horn on the clypeus; thorax with four, nearly equidistant, obtuse teeth near the anterior margin; elytra punctate-striated. Female with a slightly elevated line on the head, and another more obsolete near the anterior margin of the thorax.

The only recorded indigenous examples of this species were taken during a flood on the marshes between Peterborough and Wisbeach, in the summer of 1807, by Mr. W. Skrimshire, who states, in the Entomological Transactions, p. 317, that he captured a pair, male and female.

#### GENUS CXCIV.—TYPHÆUS, *Leach.*

*Antennæ* rather slender, the basal joint elongate and robust, slightly pilose; the second short, globose; the three following of nearly equal length, slightly elongate; the three next short, transverse, the remainder abruptly forming an ovate trilamellate club. *Palpi maxillary* with the terminal joint rather longer than the third, slightly attenuated at each end: *head* triangular: *clypeus* rhomboidal, incurved: *thorax* large, convex, produced anteriorly into horns or tubercles: *elytra* oval, convex: *body* robust, ovate: *legs* stout: *femora* simple: *tibiæ* curved, serrated externally: *tarsi* with the basal and terminal joints of equal length, elongate.

Typhæus was established as a genus by Dr. Leach, in 1812, in the Edinburgh Encyclopædia, but within these few years Fischer also proposed detaching it from Geotrupes, by the name Cerophyus, which has been adopted by Latreille, in the new edition of the Règne Animal, regardless of the priority of Dr. Leach's claim; in justness, however, to my friend, I shall retain his original appellation:—the cornuted thorax, elongate fourth joint of the antennæ, and basal joint of the tarsi, will sufficiently enable any one to detect the only indigenous species, which usually frequents sandy or gravelly wastes and heaths

Sp. 1. *vulgaris*. *Niger*; *thorace anticè tricorni, medio breviori, lateralibus porrectis elongatis, elytris striatis*: *fœmina, thorace submutico*. (Long. corp. 5—10 lin.)

Sc. Typhœus. *Linné*.—Ty. *vulgaris*. *Samouelle, pl. 1. f. 1.*—*Steph. Catal.* 106. No. 1104.

Entirely black, shining: head depressed, villose at the sides: clypeus angulated, margined, with a longitudinal elevated ridge: thorax smooth in the middle, with the sides punctated and foveolated, the male with two porrect acute horns at the anterior angle, reaching over, and as long as, the head, and an intermediate shorter ascending one in the middle: elytra striated: female with the lateral horn on the thorax very short, and in place of the central one a transverse elongate ridge.

Very variable in size and in the length of the thoracic horns, as well as in sculpture and colour. In some examples the lateral horns in the male are considerably longer than the head, and have a distinct tooth above; while others are nearly obliterated and perfectly simple: some examples have the sides of the thorax very rugose; while others are simply punctate: others again have the elytra castaneous and rather deeply sulcate: but as all intermediate shades occur, they must all be considered as belonging to one species.

Taken most commonly on heaths and commons within the metropolitan district, in April and May, and found in numbers lying dead about the end of June or July. “Far from common in Cambridgeshire.”—*Rev. L. Jenyns*. “Hill-ends, Cardew Nock, &c.”—*T. C. Heysham, Esq.* “Stockton Common near York, burrowing in sand.”—*W. C. Hewitson, Esq.* “Lundy Island.”—*G. Waring, Esq.* “Epping.”—*Mr. Doubleday*.

#### GENUS CXCV.—GEOTRUPES, *Latreille*.

*Antennæ* rather slender, basal joint long, triangular, slightly pilose; second short, globose; third elongate; fourth shorter than the fifth, which is slightly elongate; the three following transverse, cupshaped; the remainder forming an oval trilamellate club. *Palpi maxillary* with the third and fourth joints of equal length, the latter cylindric: *head* triangular: *clypeus* rhomboidal: *thorax* broad, convex, unarmed: *elytra* large, oval: *body* convex, robust: *legs* stout: *femora* short, sometimes spinose: *tibiæ* curved, more or less compressed, the anterior dentated externally, the others notched: *tarsi* with the basal joint shortest.

*Latreille*—than whom no one is more competent to decide upon a point relative to the structure of insects, and “whose accuracy is beyond all praise” in the details thereof, but who is not in-

frequently at fault when he ventures an opinion regarding the diversity of species—says “ Magnitudine, colore admodum variat *Ge. stercorarius*. Majores nostri suprà nigri, marginibus thoracis et elytrorum corporeque infrà violaceo-cœruleis, &c.—Alii minores, colore suprà intense viridi, infrà aurato-viridis, &c.—Has meras varietates ut species distinxit Dom. Marsham, in *Entomologia Britannica*; *Sc. stercorarius*, spiniger, foveatus, mutator:—which opinion given nearly a quarter of a century since has been recently assumed as a proof of the identity of certain Marshamian species of this genus with *Ge. stercorarius*, in spite of the subsequent observations of Molinously, in the first vol. of the *Transactions of the Natural History Society of Halle*, and of the palpable diversity of the insects in question, a point which I have attempted to render evident in the subjoined pages, by submitting the dictum of Latreille to the test of experience, truth alone being my object; while a retrograde movement, solely to follow the views of a distinguished writer, must inevitably lead to error and its consequences.

The short third joint of the antennæ and basal joint of the tarsi, as well as the smooth unarmed thorax, will at once enable any person to detect the insects of the present genus, which are usually found in meadows, fields and wastes, where cattle are pastured; their use in the economy of nature being to devour the dung of herbivorous animals—they abound most in the spring and autumn, and very frequently are observed of an evening flying towards sunset, with a loud hum:—they are much infected with acari.

Sp. 1. vernalis. *Subhemisphericus violaceo-niger, nitidus*; antennarum capitulo fusco, thorace elytrisque lævibus, glabris. (Long. corp. 6—9 lin.)

*Sc. vernalis*. Linné.—Donovan, xvi. pl. 547. f. 1.—*Geo. vernalis*. Steph. Catal. 107. No. 1105.

Subhemispheric: glossy violet-black; with the club of the antennæ fuscous: clypeus rugose, with the vertex slightly prominent: thorax very finely and faintly punctate on the disc, rather coarsely so on the lateral margin, near which on each side is a deep fovea: elytra very glossy, smooth, but with a lens they appear faintly punctate striate, and obsoletely strigose between the striæ: body beneath pubescent, deep violet or greenish: posterior femora denticulated in the male.

Very variable in size and colour, specimens occurring of a rich violet-blue, greenish or nearly black.

Somewhat local; but found in sandy situations in several places

within the metropolitan district:—in plenty on Wimbledon common; also near Ripley, Hertford, Croydon, in the New Forest, in Devonshire, and abundantly in Suffolk, near Woodbridge. “Baron Wood.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.*

Sp. 2. *lævis.* *Subhemisphæricus, atro-violaceus, nitidus, thorace confertissimè punctulato, elytris lævissimis, irregularitèr obsolete punctato-striatis.* (Long. corp. 6—9 lin.)

Sc. *lævis.* *Haworth.*—Ge. *lævis.* *Steph. Catal.* 107. No. 1106. *Curtis, vii. pl.* 266.

Subhemispheric, deep violet or black, shining; vertex slightly prominent; clypeus rugose; thorax very thickly and rather deeply punctured throughout, with a fovea on each side near the lateral margin; elytra very smooth and glossy, with several obsolete irregular faintly punctured striæ; body beneath pubescent, violet, sometimes greenish; posterior femora serrated on the inner margin in the males; club of the antennæ black, with its apex sometimes ferruginous.

Variable both in size and colour, like its congeners.

Not very uncommon on heaths near London, but more abundant in the mountainous districts of Wales and Cumberland; also found in the New Forest. “Barmouth and North Wales.”—*Rev. F. W. Hope and C. Darwin, Esq.* “In abundance on the mountains near West Water in Cumberland, and in Borrowdale.”—*W. C. Hewitson, Esq.* “Common on heaths in the neighbourhood of Nottingham, from March to October.”—*Dr. Howitt.*

Sp. 3. *sylvaticus.* *Subhemisphæricus, supra niger, violaceo marginatus, infra violaceus aut aurato-viridis, vertice tuberculo acuto, thoracis disco punctis sparsis, elytris striatis, interstitiis transversim strigosis.* (Long. corp. 6—10 lin.)

Sc. *sylvaticus.* *Paykul.*—*Don.* xvi. *pl.* 547. *f.* 2.—Ge. *sylvaticus.* *Steph. Catal.* 107. No. 1107.

Subhemispheric; above blue-black, margined with violaceous; beneath violaceous or golden green; clypeus rugose, with an acute tubercle on the vertex; thorax sprinkled with distinct, somewhat remote punctures on the disc, somewhat rugose on the lateral margins, with a punctate fovea towards the edge; elytra rather faintly striated, the interstices transversely strigose; antennæ somewhat piceous, with the club fuscous; tarsi piceous; posterior femora in the male with a single denticulation on the inner edge.

Extremely variable in size, and in colour; some examples being of a rich purplish violet above, and others nearly black; and the under surface being occasionally of a rich coppery-purple, or golden-green.

The most abundant species of this genus within the metropolitan

district, especially on wastes in the vicinity of woods. “Armathwaite.”—*T. C. Hesylham, Esq.* “Heaths near Nottingham, in July and August.”—*Dr. Howitt.* “Epping.”—*Mr. Doubleday.*

Sp. 4. *niger. Subhemisphericus, supra obscurus, niger, lævis, subtus atro-violaceus, pedibus æneis, elytris obsolete striatis.* (Long. corp. 7—9 lin.)

Sc. *niger. Marsham.*—Ge. *niger. Steph. Catal.* 107. No. 1108.

Subhemispheric: above dull-black, smooth, beneath deep violet; clypeus with an obtuse tubercle; thorax very obsoletely punctate on the disc, the punctures remote, except towards the lateral margins, where they become confluent, with a slightly impressed fovea towards the edge; elytra very obsoletely striated, between the striæ some obscure strigose lines; legs greenish-brass, or violet.

The most doubtful species of the genus: I suspect it may only prove a variety of *Ge. sylvaticus*.

Found within the metropolitan district, but not common: also in Norfolk and Suffolk. “Near Nottingham.”—*J. Marlow, Esq.*

Sp. 5. *foveatus. Subovalis, niger, thorace subpunctato utrinque punctis duabus excavato, lateribus rugulosis, elytris sulcatis.* (Long. corp. 7—9 lin.)

Sc. *foveatus. Marsham.*—*Sowerby, i. pl. 55. f. 2.*—Ge. *foveatus. Steph. Catal.* 107. No. 1109.

Suboval; black, with the margins of the thorax and of the elytra deep-bluish; clypeus with an acute tubercle on the vertex; thorax smooth, with a few scattered punctures on the disc, two foveæ on each side, and the lateral margins rugosely-punctate; scutellum violet; elytra sulcate; the interstices smooth; tarsi piceous; posterior femora with one or more denticulations on the inner edge.

Distinguished by having two foveæ on the lateral margins of the thorax, which is subpunctate, and the elytra sulcate.

Found occasionally within the metropolitan district and in Suffolk.

Sp. 6. *punctato-striatus. Oblongo-ovatus, violaceo-niger, vertice tuberculo minuto, thorace lævi, elytris profundè punctato-striatis.* (Long. corp. 6—8 lin.)

Ge. *punctato-striatus. Kirby MSS.*—*Steph. Catal.* 107. No. 1110.

Oblong-ovate, above deep violaceous-black, beneath rich violet or purplish: clypeus with an obtuse minute tubercle: thorax with the disc impunctate, a few confluent punctures and a fovea on the lateral margins: elytra rather deeply punctate-striate, the striæ equidistant, the interstices slightly convex and a little strigose, especially towards the apex: legs violaceous: tarsi piceous: club of the antennæ ferruginous.

The oblong form and equidistant punctate striæ of this species, combined with the

plain disc of the thorax, which has merely an obsolete longitudinal row of punctures in its centre, at once point out its distinctions.

Found within the metropolitan district, and in Suffolk.

Sp. 7. *mutator*. *Oblongo-ovalis, supra versicolor, infra splendide aureo- aut cupreo-viridis aut amethystino-purpureus, thoracis disco impunctato, elytris profunde punctato-striatis, striis per paria digestis.* (Long. corp. 7—10 lin.)

Sc. *mutator*. *Marsham.*—Ge. *mutator*. *Steph. Catal.* 107. No. 1111.

Oblong-oval, above violaceous or green, of a rich amethystine hue, very glossy and brilliant: clypeus very rugose, with an acute elevated tubercle on the vertex: thorax convex, the disc impunctate glossy, with an irregular dorsal channel, having a few scattered impressions in its centre, more or less obliterated anteriorly, arising from a punctate fovea on the anterior margin of the thorax, and terminating a little before the hinder margin: scutellum large, depressed in the centre, its margin membranaceous: elytra rather deeply punctate-striated, the striæ disposed in pairs, especially towards the shoulders and outer margin of the elytra, the interstices convex, the third from the suture punctate: body beneath very splendid and rich coppery or golden-green, or rich amethystine purple, with brilliant iridescent shades: legs variable in hue, like the upper surface; tarsi piceous: antennæ fuscous at the base, with the capitulum dusky.

Extremely variable in colour, some examples being of a remarkably rich hue; but all have the striæ on the elytra disposed in pairs.

This insect occurs in the utmost profusion in some fields between South Lambeth and Clapham, and is also found not uncommonly in Battersea-fields; but during several years' research in the fields to the north of London, about Islington, I never observed a single example, although *Geo. stercorarius* abounds therein; whereas in the former localities it is evidently rare: and as every individual that I have inspected, amounting to several hundreds, possesses its own peculiar characters, I feel convinced, notwithstanding the high authority of Latreille, that *Ge. mutator* is positively a distinct species from either of the others:—it is likewise found in Somersetshire, near Bristol. “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 8. *puncticollis*. *Oblongo-ovatus, violaceo-niger; vertice tuberculo minuto, thoracis disco undique sparsim punctato, elytris punctato-striatis interstitiis subdepressis.* (Long. corp. 7—10 lin.)

Sc. *puncticollis*. *Molinousky, Act. Hal.* i. 50.—*Ge. puncticollis*. *Steph. Catal.* 107. No. 1112.

Oblong-ovate: above deep violet-black, beneath violaceous: clypeus rugose, with a minute tubercle on the vertex: thorax moderately convex, with a punctate dorsal channel; the disc throughout covered with scattered, not very distant,



punctures, the lateral margins very thickly punctured, with a fovea towards the middle: scutellum smooth, with an impressed dorsalline: elytra moderately convex, slightly elongate, punctate-striate, the interstices smooth, depressed: legs violaceous-black; tarsi pitchy-black: antennæ with the club slightly castaneous or rusty-piceous.

Variable in bulk, but not much in colour:—and may be at once known from its congeners by the deeply impressed puncta on the thorax, combined with its distinctly punctate-striate elytra, with depressed interstices, in which latter characters it differs from *Ge. sylvaticus*, *niger*, and *levis*, which have the thorax more or less punctate throughout; but these insects are of a totally different form.

Not very abundant within the metropolitan district, but apparently more so near Bristol, whence I have received many specimens: it also occurs in Wales. “Cooms-wood, Armathwaite.”—*T. C. Hcyslum*, *Esq.* “Common in Cambridgeshire.”—*Rev. L. Jenyns*. “Swansea, not uncommon.”—*L. W. Dillwyn*, *Esq.*

Sp. 9. *sublævigatus*. *Oblongo-ovalis*, *violaceo-ater*, *marginibus purpureis*, *vertice tuberculo obsoleto*, *thoracis disco convexo lævi*, *utrinque bifoveolato*, *lateribus punctatis*: *clytris tenuissimè striatis*, *striis punctatis*, *interstitiis planis*. (Long. corp. 10 lin.)

*Ge. sublævigatus mihi*.—*Steph. Catal.* 107. No. 1113.

Oblong-oval: deep violaceous-black, with the lateral margins of the thorax and elytra purple: clypeus slightly rugose, with an obsolete central tubercle: thorax moderately convex, the disc smooth, with an interrupted punctate dorsal channel, the sides rather thickly and deeply punctate, especially on the margin, where the puncta become confluent; on each side are two foveæ, one deep punctate one externally, and a smaller impunctate one towards the disc; and towards the middle of the anterior margin are also two other rather large impunctate depressions, equidistant from each other and the lateral margins: scutellum rugose in the centre: elytra finely striated, the striæ composed of distinct punctures, the interstices depressed and smooth: body beneath violaceous: legs the same: tarsi piceous: antennæ with the capitulum rusty-piceous.

In form resembling *Ge. stercorarius* ♂, but totally distinct from that insect, from which its obsoletely striated elytra, with flat interstices, at once remove it, and distinguish it from its congeners.

My example of this conspicuous species was taken by myself, many years since, in the neighbourhood of London, but I do not remember the exact locality.

Sp. 10. *stercorarius*. *Oblongo-ovalis*, *niger*, *infra violaceus*, *vertice tuberculo acuto*, *thorace lævi*, *linellâ dorsali abbreviatâ impressâ*, *clytris profundè striatis striis impresso-punctatis*. (Long. corp. 8—12 lin.)

*Sc. stercorarius.* *Linné.*—*Don.* viii. *pl.* 264. *f.* 3.—*Ge. stercorarius.* *Steph. Catal.* 107. No. 1114.

Oblong-oval; black above, deep violaceous beneath; clypeus with an acute tubercle on its vertex; thorax convex, the disc impunctate, with a simple abbreviated dorsal channel behind, the lateral margins thickly punctate close to the edge, with a few scattered puncta interiorly, and on each side a single small glossy punctate fovea; scutellum punctate in the centre; elytra deeply striated, the striæ with impressed punctures, the interstices convex, smooth.

Male with a solitary erect spine on the anterior tibiæ within, and one or more strong teeth on the inner edge of the posterior femora.

Also variable in size and colour, but the latter more constant than in the other species, the only variation consisting of a slight gloss of greenish or bluish upon the upper surface.

Extremely abundant throughout the metropolitan district; also common in Suffolk, Norfolk, the New Forest, Devonshire, near Dover, Brighton, &c. “Common in Cambridgeshire.”—*Rev. L. Jenyns.* “Plentiful in Yorkshire.”—*W. C. Hewitson, Esq.* “Abundant near Carlisle.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.* “Common near Swansea.”—*L. W. Dillwyn, Esq.*

#### FAMILY XXVII.—APHODIIDÆ, *MacLeay.*

*Antennæ* nine-jointed, the basal joint slightly elongate, the capitulum subglobose-ovate, triphyllous. *Labrum* concealed beneath the clypeus: *mandibles* hidden, subcorneous or coriaceous: *maxillæ* with membranaceous processes: *palpi*, *maxillary* filiform, naked: *labial* short, slightly pilose, with subglobose joints: *head* semicircular: *clypeus* sometimes tuberculate: *thorax* transverse-quadrate: *scutellum* distinct: *body* ovate, rounded at the extremity; somewhat convex above; completely covered by the elytra: *legs* short, equidistant; anterior *tibiæ* broad, tridentate externally: *femora* with an impressed row of hairs within.

In this family are included some of the smallest of the lamellicorn insects: they differ from the Scarabæidæ in having short, dilated coriaceous mandibles, the pairs of legs being at equal distances from each other, and the scutellum distinct; from the Geotrupidæ by their small bulk, the mandibles being concealed beneath the clypeus, and the palpi very short and glabrous: and from the Trogidæ by the labrum being concealed beneath the clypeus, their mandibles being thin and compressed, and the elytra not reflexed beneath the apex of the abdomen:—they are chiefly coprophagous, but some

of them subsist upon putrescent vegetable matter: the indigenous species have been divided into the two following genera:—

<i>Palporum</i> articulo ultimo	{ filiforme, haud dilatato: . . . . .	196. APHODIUS.
	{ dilatato: . . . . .	197. PSAMMODIUS.

### GENUS CXCVI.—APHODIUS, *Illiger*.

*Antennæ* with the basal joint slightly elongate, robust, cylindric; the second globose; third small; the three following transverse; the remainder forming a triphyllous, subglobose-ovate, capitulum. *Palpi*, *maxillary* filiform, naked, the terminal joint longer than the third, cylindric; *labial* very short, slightly pilose, the joints nearly equal, the terminal one not dilated: *labium* emarginate at the apex: *head* broad, with a semicircular or lunate clypeus, frequently tuberculate: *body* oblong, convex, or slightly depressed.

The genus *Aphodius* comprises a vast host of species, of which a considerable number inhabit Britain; their habits are nearly similar, living in dung, and flying during the sunshine in roads, meadows, &c., where their pabulum is to be obtained; the larvæ resemble in form that of an *Oryctes* or *Melolontha* (cockchafer), and feed like the imago upon dung. From the extent of the genus, I have divided it into the following sections, for the sake of more readily ascertaining the species, many of which are extremely variable, and difficult to determine with certainty, without great trouble.

#### A. Scutellum very large, elongated.

##### a. *With the body convex.*

Sp. 1. FOSSOR. *Ater, clypeo tuberculis tribus, medio subcornuto, elytris leviter punctato-striatis, thorace subretuso.* (Long. corp. 4—6 lin.)

Sc. FOSSOR. *Linné.*—*Don.* xii. pl. 417. f. 3.—*Ap. Fossor.* *Steph. Catal.* 108. No. 1115.

Very convex, entirely of a deep glossy-black; glabrous; clypeus emarginate, with three tubercles, the middle one elongate, acute; thorax anteriorly impressed in the middle, the sides sparingly punctate: elytra rather faintly punctate-striate, the interstices very smooth. Female with the tubercles on the clypeus nearly obsolete; the disc of the thorax punctate throughout; with the anterior impressions nearly obsolete.

Variable in size, and some examples are more obscure than others.

Very common throughout the metropolitan district, especially in horse-dung. “*Bottisham.*”—*Rev. L. Jenyns.* “*York and New-*

castle.”—*W. C. Hewitson, Esq.* “Cardew Mire.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.* “Common throughout the year (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 2. subterraneus. *Niger, nitidus, subdepressus, clypeo emarginato trituberculato, elytris crenato-sulcatis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Sc. subterraneus. *Linné.*—*Martyn, pl. 4. f. 33.*—Ap. subterraneus. *Steph. Catal. 108. No. 1116.*

Entirely black, very glossy, slightly depressed: clypeus angulated, emarginated anteriorly, punctulated within the margins, with a slight elevation in front, and three tubercles behind: thorax large, covered throughout with deep scattered punctures; scutellum depressed; elytra rather deeply sulcated, the sulci crenated; body slightly pubescent beneath, and with the legs black, tarsi piceous, or castaneous.

Abundant during the spring in Battersea-fields: also found in Norfolk and Devonshire. “Rockcliff Marsh.”—*T. C. Heysham, Esq.* “Near York.”—*W. C. Hewitson, Esq.* “Not uncommon in cow-dung (near Swansea) in the spring.”—*L. W. Dillwyn, Esq.*

Sp. 3. hæmorrhoidalis. *Brevis, niger, clypeo trituberculato, elytris crenato-striatis, apice rufis.* (Long. corp. 2—3 lin.)

Sc. hæmorrhoidalis. *Linné.*—*Martyn, pl. 4. f. 31.*—Ap. hæmorrhoidalis. *Steph. Catal. 108. No. 1117.*

Short, black, slightly glossy: clypeus subemarginated, with three minute tubercles behind: thorax thickly punctate: scutellum acuminate, punctate: elytra moderately convex, rather deeply crenate-striated, black, with the apex more or less rufous; body beneath and legs pitchy-black: tarsi rufescent.

Var.  $\beta$ . *Steph. Catal. l. c.*—With a rufescent spot at the base of the elytra upon the shoulder.

Not a very abundant species near London; found occasionally in meadows near Hertford, Coombe, and Darenth: in the Castle meadow, Dover, I found the insect in the utmost profusion, in August, 1819. It is found in Norfolk, the New Forest, Devonshire, and near Bristol. “Dalston.”—*T. C. Heysham, Esq.* “In dung (near Swansea), not uncommon.”—*L. W. Dillwyn, Esq.*

b. *With the body depressed.*

Sp. 4. erraticus. *Ater, punctatissimus, capite unituberculato, elytris griseo-lividis striatis, interstitiis punctulatis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

Sc. erraticus. *Linné.*—*Martyn, pl. 4. f. 37.*—Ap. erraticus. *Steph. Catal. 108. No. 1118.*

Black, depressed, broad: clypeus suborbiculate, very much punctate, with a

single, more or less obsolete, tubercle on the vertex, and sometimes an elevated line on each side: thorax convex, very thickly and finely punctate throughout: elytra short, considerably depressed, livid-griseous, with the suture rather dusky, finely punctate-striated, the interstices delicately punctulated.

Elytra sometimes fuscous, with the apex pale.

Not uncommon in the metropolitan district, particularly in the spring. "Common, particularly in cow-dung (near Swansea), nearly all the year."—*L. W. Dillwyn, Esq.* "Bottisham."—*Rev. L. Jenyns.* "Near Newcastle."—*W. C. Hewitson, Esq.*

#### B. Scutellum small, short.

a. *With the clypeus tuberculated, generally emarginated.*

##### 1. With the body convex.

‡ Sp. 5. *Scrutator.* *Ater, clypeo trituberculato, thoracis margine, elytris abdomineque rufis.* (Long. corp. 4—5 lin.)

Ap. *Scrutator.* *Fabricius.*—*Steph. Catal.* 108. No. 1119.

Black, shining: clypeus rounded, with three tubercles: thorax punctate, with the margins broadly rufous: elytra striated, rufous, with an elevated point at the base and apex: abdomen entirely rufous: legs black.

A specimen of this insect is said to have been taken near Leeds, by the late Mr. Atkinson—others were in the collection of Mr. MacLeay, according to Marsham.

Sp. 6. *finetarius.* *Niger, nitidus, abdomine concolore, thoracis angulis anticis elytrisque totis rubris, clypeo trituberculato.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

Sc. *finetarius.* *Linné.*—*Don.* xii. pl. 404. f. 1.—*Aph. finetarius.* *Steph. Catal.* 108. No. 1120.

Shining black; clypeus obscurely emarginate in front, with a distinct short elevated line on the vertex and three tubercles behind: thorax sparingly punctate, with the anterior angle on both sides testaceous or red; and in the male the anterior margin with an excavation in the middle: elytra bright rufous, immaculate, punctate-striate, the interstices smooth: abdomen and legs black; tarsi rufous.

The elytra are sometimes slightly fuscous:—known from the following by its black abdomen.

Very abundant in the spring, and early summer months, not only throughout the metropolitan district, but I believe in other parts. "Bottisham."—*Rev. L. Jenyns.* "Common about Carlisle."—*T. C. Heysham, Esq.* "York and Newcastle."—*W. C. Hewitson, Esq.* "Epping."—*Mr. Doubleday.* "Very common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 7. *foetens*. *Niger, nitidus, thoracis angulis, anticis, elytris, abdomineque rubris, clypeo trituberculato*. (Long. corp. 3 lin.)

Sc. *foetens*. *Fabricius*.—Ap. *foetens*. *Steph. Catal.* 108. No. 1121.

Glossy black: clypeus entire, with an obsolete elevated line on the vertex, and three tubercles behind, the central one longest: thorax sparingly punctate, the anterior angles with a rufous spot: elytra rufous, immaculate, rather deeply punctate-striate: abdomen pale rufous: antennæ and palpi the same, the latter with a piceous ring on the terminal joint: legs black; tarsi rufescent.

In some examples the elytra are of a duller hue than in others.

Latreille, in his *Genera*, &c., considers this as a mere variety of the foregoing; but its different period of appearance, as well as the constant dissimilarity of characters, clearly show its distinction.

Found in June and during the summer within the metropolitan district, not in company with the preceding. “Bottisham.”—*Rev. L. Jenyns*. “Common, especially in horse-dung about the sea side (near Swansea), in summer.”—*L. W. Dillwyn, Esq.*

Sp. 8. *scybalarius*. *Niger, nitidus, elytris punctato-striatis griseis suturâ nigrâ, clypeo trituberculato*. (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

Sc. *scybalarius*. *Panzer*.—Sc. *coprius*. *Don*. xii. pl. 404. f. 4.—Ap. *scybalarius*. *Steph. Catal.* 109. No. 1122.

Shining black: clypeus angulated, entire, with three tubercles behind, and an obsolete carina on the vertex: thorax immaculate, with a few scattered punctures on the disc, which is nearly smooth anteriorly: elytra pale griseous, with the suture dusky, rather deeply punctate-striated: legs testaceous: antennæ testaceous, with the capitulum dusky.

Var.  $\beta$ . *Steph. Catal.* l. c.—Sc. *conflagratus*. *Don*. ii. pl. 70.—With a broad oblique fuscous or black patch on the elytra, reaching from the shoulder towards the apex.

The concolorous anterior angles of the thorax and pale elytra distinguish this species from the foregoing.

Less abundant than the last, but nevertheless not unfrequently found during the spring months in Battersea-fields, and other places within the metropolitan district: in Norfolk, Suffolk, &c. “Botchardby, Dalston, &c.”—*T. C. Heysham, Esq.* “York and Newcastle.”—*W. C. Hewitson, Esq.* “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 9. *rufescens*. *Rufo-ferrugineus, convexus, thoracis disco nigro punctatissimo, pedibus rufis, immaculatis*. (Long. corp.  $2\frac{1}{3}$ —3 lin.)

Ap. *rufescens*. *Fabricius*.—*Steph. Catal.* 109. No. 1123.

Rufo-ferruginous, convex, shining: clypeus with three tubercles, the intermediate longest in the male; the vertex rather blackish: thorax glossy black,

the lateral margins broadly dull ferruginous, with an obscure fuscous spot, the disc throughout thickly and finely punctate: elytra punctate-striate, generally immaculate, but sometimes with a larger or smaller oblique fuscous patch, or with the entire disc fuscous: body beneath and legs immaculate rufo-ferruginous; breast sometimes piceous.

More elongate than either of the preceding insects, from all of which it may be known by its immaculate red legs.

Common in horse-dung throughout the metropolitan district: also found in Norfolk. "Occasionally found on the sand hills (near Swansea), about midsummer."—*L. W. Dillwyn, Esq.* "Bot-tisham."—*Rev. L. Jenyns.*

Sp. 10. castaneus. *Rufo-castaneus, elytris antennis pedibusque testaceis, capite subtrituberculato.* (Long. corp.  $2\frac{1}{2}$  lin.)

Sc. castaneus. *Marsham.*—Ap. castaneus. *Steph. Catal.* 109. No. 1124.

Reddish-chestnut, shining: clypeus with three obsolete tubercles: thorax somewhat castaneous, the disc darker, and throughout sprinkled with minute punctures: elytra testaceous, punctate-striate: legs pale testaceous.

Probably an immature state of the foregoing; the puncta on the thorax seem however differently disposed.

I possess one specimen captured by myself near London, and a pair from the Marshamian cabinet.

Sp. 11. ochraceus. *Oblongus, niger, parum convexus, clypeo trituberculato, thorace punctatissimo, elytris ochraceis, pedibus piceis.* (Long. corp. 3 lin.)

Ap. ochraceus *mihi.* *Steph. Catal.* 109. No. 1125.

Oblong-black: clypeus angulated, thickly punctate, with three small tubercles behind: thorax thickly and deeply punctate throughout, with the anterior angles testaceous: elytra rather long, ochraceous, slightly clouded with dusky, punctate-striated: abdomen dusky-testaceous: legs pitchy-black: tarsi rufous; antennæ dusky-ferruginous.

More convex than the two last, from which it also differs by having the anterior angles alone of the thorax pale, and the disc thickly punctate.

My example of this insect, which greatly resembles *A. Laponum* of Gyllenhal, was taken near London.

Sp. 12. sordidus. *Livido-testaceus, parum convexus, thoracis disco nigro parce punctulato, corpore pedibusque nigro variis.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{3}{4}$  lin.)

Sc. sordidus. *Fabricius.*—Ap. sordidus. *Steph. Catal.* 109. No. 1126.

Rather depressed, livid-testaceous: clypeus entire, ferruginous; the disc and crown black, the latter with three tubercles: thorax broad, convex, very glossy, the disc smooth, or with a few scattered punctures; the margins pale, the lateral ones broadly so, with a black dot in the middle: elytra broad,

punctate-striate, livid or pale-griseous, glossy, with the suture obscure, and frequently a humeral and one or two other black or dusky spots: body and legs livid, clouded with dusky.

The clouded legs and more depressed form distinguish this insect from *Ap. rufescens*, which it most resembles.

Not uncommon in marshy districts, abounding in Battersea-fields: also found in Norfolk. "Rockcliff."—*T. C. Heysham, Esq.* "Near Yarmouth."—*W. C. Hewitson, Esq.* "Not uncommon (near Swansea) from spring to autumn."—*L. W. Dillwyn, Esq.*

Sp. 13. *nitidulus*. *Elongatus, subcylindricus, nigro-piceus, clypeo tuberculato thoracisque lateribus ferrugineis, elytris lividis suturâ fuscâ.* (Long. corp. 2—2½ lin.)

*Ap. nitidulus.* *Fabricius.*—*Steph. Catal.* 109. No. 1127.

Elongate, subcylindric, pitchy-black: clypeus anteriorly ferruginous, with three tubercles on the vertex, and a single obsolete one anteriorly: thorax shining black, punctulated, with the lateral margins broadly testaceous: elytra punctate-striate, shining, pale testaceous, with the suture dusky: body beneath pitchy-ferruginous; legs paler.

Smaller than any of the foregoing, and more elongate, with the lateral margins of the thorax immaculate.

Not common: it occurs sometimes within the metropolitan district, and also in Norfolk. "Rather common in dung, particularly on the sea shore (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 14. *lividus*. *Oblongus, lividus, nitens, vertice, thoracis disco, elytrorum suturâ discoque nigris.* (Long. corp. 2 lin.)

*Sc. lividus.* *Olivier.*—*Ap. lividus.* *Steph. Catal.* 109. No. 1128.

Oblong, livid, shining: clypeus semiorbicular, slightly emarginated anteriorly, rufescent, with the vertex black, and bearing three tubercles: thorax convex, very glossy, posterior and lateral margins livid, the sides broadest, with a fuscous dot; the disc, especially in front, black: elytra livid, with the suture dusky, and a large patch on the disc fuscous, punctate-striated: body beneath pitchy-brown, with the abdomen paler: legs pale, with the femora stout.

Slightly variable in colour, and in the size of the fuscous patch upon the elytra.

The only locality I am aware of for this pretty species is the vicinity of Darenth-wood, in the lanes about which place I have very frequently captured it during the month of July.

Sp. 15. *conspurcatus*. *Oblongo-niger, thoracis lateribus pallidis, elytris tenui*



*punctato-striatis pallidis, maculis septem nigris distinctis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Sc. conspurcatus. *Linné*.—Ap. conspurcatus. *Steph. Catal.* 109. No. 1129.

Oblong, black, glossy: clypeus entire, with three tubercles, and an oblong ferruginous spot before the eyes: thorax convex, thickly punctate, the sides broadly pale, with an obsolete fuscous spot: elytra pale, a little convex, faintly punctate-striate, with the interstices flat, smooth, shining; each elytron with seven distinct oblong-quadrate black spots, of which two are between the second and third striæ from the suture, beyond the middle, one behind the other; a third anterior, between the third and fourth striæ; the fourth and fifth between the fourth and fifth striæ, the former before and the latter behind the middle; the sixth obliquely curved on the shoulder; and the seventh in the middle of the disc, elongate: abdomen and legs pale testaceous.

Differs from the following, which it most resembles, in having the elytra more depressed and less deeply striated, the suture and striæ not dusky, and the spots differently placed.

Rare; it has been taken within the metropolitan district, but it appears more frequent in the west of England. "In horse-dung (near Swansea), not common."—*L. W. Dillwyn, Esq.*

Sp. 16. stiticus. *Niger, nitidus, clypeo bimaculato, thoracis lateribus testaceis, elytris profundè punctato-striatis nigro maculatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Sc. stiticus. *Panzer*.—Ap. stiticus. *Steph. Catal.* 109. No. 1130.

Shining-black: clypeus entire, with three obsolete tubercles, and before the eyes a ferruginous spot on each side: thorax thickly punctured, the disc glossy black; with the sides broadly, and the anterior and posterior edges narrowly, margined with testaceous, the former with a fuscous dot in the middle: elytra griseous-testaceous, rather deeply punctate-striate, the interstices elevated, glossy, and smooth; the suture and the striæ fuscous; in the middle of the base an elongate black spot, towards the suture and middle of the elytra two other small united ones, joined to the preceding by the fuscous striæ; within the apex three other small ones, the middle one being anterior; and beneath the shoulder an oblique stria: body fuscous beneath; legs pale.

The spots on the elytra are more or less confluent in different examples, and vary in size:—the insect chiefly differs from the last described by the number and confluence of the spots, with the fuscous and deeply impressed striæ, and more convex form.

Not uncommon near London: I have taken it during the summer at Ripley, and near Hertford.

Sp. 17. inquinatus. *Niger, nitidus, thoracis angulis anticis maculâ rufâ, elytris griseis maculis nigris, interioribus tricompositis.* (Long. corp.  $2-2\frac{1}{2}$  lin.)

*Sc. inquinatus. Fabricius.*—*Ap. inquinatus. Steph. Catal. 110. No. 1131.*

Shining black: clypeus slightly emarginated, with three tubercles; thorax thickly, but finely punctulated, with the anterior angle on both sides reddish: elytra pale griseous; with the suture dusky; finely punctate-striate, with various black marks, viz. on the middle of the base an oblong spot; against the middle interiorly, another, composed, as it were, of three; beneath which, towards the apex, a third, also triplex; within the margin, beneath the shoulder, a slightly oblique elongate striga, and generally a lunular one within the apex: body piceous: legs pale griseous, varied with black.

Extremely variable in the confluence or absence of the marks on the elytra; many of the varieties having been described or named as distinct species, as may be seen by a reference to my Systematic Catalogue, as above cited.

The rufous anterior angles of the thorax, united to its spotted elytra and pale legs, sufficiently distinguish this variable insect from its allies.

Not uncommon in pastures throughout the metropolitan district. "Common in the spring near Bottisham."—*Rev. L. Jenyns.* "Aiket Gate."—*T. C. Heysham, Esq.* "Near Yarmouth and York."—*W. C. Hewitson, Esq.* "Not very common (near Swansea)."—*L. W. Dillwyn, Esq.* "In profusion near Bow."—*Mr. Ingpen.*

*Sp. 18. tessulatus. Brevis, convexus, niger, immaculatus, elytris griseo-pallidis, fasciis obliquis tessellato-denticulatis nigris.* (Long. corp. 2 lin.)

*Sc. tessulatus. Paykul.*—*Ap. tessulatus. Steph. Catal. 110. No. 1132.*

Short, very convex, black, shining: clypeus slightly emarginated, rugose-punctate, with three small tubercles on the vertex, and a slightly bent short carina anteriorly: thorax very convex, finely punctulated, with the anterior angle slightly piceous: elytra punctate-striated, pale griseous with black spots, disposed in two or three irregular confluent tessellated fasciæ, of which the posterior is semicircular, arises at the margin of the base beneath the shoulder, and is united to the opposite one beyond the middle of the suture: body and legs black: tarsi ferruginous.

Slightly variable in the dissimilarity of the tessellated strigæ on the elytra:—known from *Ap. inquinatus*, which it somewhat resembles, by its convex form, black legs, and subbifasciate tessellated elytra.

Rare; three or four indigenous specimens having hitherto come beneath my observation: it has been taken near Tunbridge Wells, and I believe in South Wales. "Henhault Forest."—*Mr. Beck.*

*Sp. 19. terrestris. Brevis, convexus, ater, clypeo trituberculato, elytris leviter punctato-striatis, interstitiis opacis punctulatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

*Sc. terrestris. Fabricius.*—*Ap. terrestris. Steph. Catal. 110. No. 1133.*

Short, convex, black: clypeus slightly emarginated, rugose-punctate, with three tubercles; thorax thickly and rather coarsely punctate, immaculate: elytra

convex, obtuse, faintly punctate-striated, the interstices opaque and thickly covered with minute impressions; body and legs glabrous, black; tarsi piceous.

Varies in having the elytra and legs more or less of a castaneous hue.

A very abundant species throughout the metropolitan district. "Bottisham."—*Rev. L. Jenyns*. "York."—*W. C. Hewitson, Esq.* "Great Barrock."—*T. C. Heysham, Esq.* "Not uncommon (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 20. obscurus. *Niger, clypeo tuberculis tribus, intermedio subcornuto, elytris obscuris striatis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Sc. obscurus. *Marsham*.—Ap. obscurus. *Steph. Catal.* 110. No. 1134.

Short, black; clypeus with three tubercles, the middle one subcornute, and an anterior bent carina; thorax convex, deeply punctulated, glossy; elytra rather obscure, fuscous, with the suture black, punctate-striated, the interstices punctulated; legs black.

This may possibly be a large variety of the foregoing species; from which it chiefly differs in bulk, in the paler hue of its elytra, and by having the central tubercle of the clypeus considerably produced.

Not uncommon near London. "Bottisham."—*Rev. L. Jenyns*. "Swansea."—*L. W. Dillwyn, Esq.*

Sp. 21. terrenus. *Niger, capite tuberculis tribus æqualibus, elytris lævissimè striatis brunneis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ap. terrenus. *Kirby MSS.*—*Steph. Catal.* 110. No. 1135.

Black, rather obscure: clypeus slightly emarginate, with three equal tubercles: thorax thickly and somewhat finely punctulated: elytra brunneous or red-brown, obscure, striated, the striæ very delicately punctate: body beneath black: legs piceous or red-brown.

Differs in its smaller size, by the equality of the occipital tubercles, brunneous elytra, and more delicately punctured surface, from the two preceding species.

Found occasionally near London, in Suffolk, Norfolk, &c. "Not uncommon (near Swansea)."—*L. W. Dillwyn, Esq.* "Bottisham."—*Rev. L. Jenyns*. "York."—*W. C. Hewitson, Esq.*

Sp. 22. ater. *Niger, capite tuberculis tribus, medio subcornuto, elytris striatis lævissimis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ap. ater. *Fabricius?*—*Steph. Catal.* 110. No. 1136.

Black: clypeus rounded, slightly emarginated, with three minute tubercles, the central one longest: thorax slightly punctate, shining; immaculate: elytra black and shining, striate, the striæ simple: body black; legs piceous.

The slightly punctulate thorax, elongate central tubercle on the clypeus, and smoothly striated elytra, are the chief distinguishing characters of this species.

Found within the metropolitan district.

Sp. 23. *nitidus*. *Ater, nitidissimus, clypeo tuberculis tribus subæqualibus, elytris punctato-striatis, interstitiis lævissimis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ap. *nitidus*. Kirby MSS.—*Steph. Catal.* 110. No. 1137.

Black, very glossy: clypeus scarcely emarginated, with three nearly equal tubercles: thorax very finely and distantly punctulated: elytra pitchy-black, punctate-striate; the interstices slightly convex and impunctate: legs pitchy-black.

The impunctate interstices of the striæ on the elytra, united to the punctations of the striæ themselves, the subæqual occipital tubercles, and very glossy surface, distinguish this species.

Taken near London and in Suffolk.

Sp. 24. *lucens*. *Ater, nitidissimus, clypeo emarginato, tuberculis tribus, intermedio subcornuto, elytris punctato-striatis, interstitiis lævissimis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ap. *lucens*. Gyllenhal?—*Steph. Catal.* 110. No. 1138.

Allied to the last: deep very glossy black: clypeus emarginated, with three posterior tubercles, the central one elongate: thorax rather coarsely punctate on the disc, the lateral margin with an obscure piceous spot: elytra punctate-striate, the interstices rather convex, impunctate: body beneath and legs pitchy-black.

From Ap. *granarius*, which has an obscure reddish or piceous spot on the lateral margins of the thorax, this is known by the coarsely punctate surface of the latter, and distinctly trituberculated clypeus; by which characters it also differs from the preceding species.

Found within the metropolitan district, and in Norfolk.

Sp. 25. *hæmorrhous*. *Subdepressus, ater, subobscurus, clypeo emarginato, tuberculis tribus æqualibus; thorace sparsè punctato, elytris apice piceo-rufis, punctato-striatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ap. *hæmorrhous*. Kirby MSS.—*Steph. Catal.* 110. No. 1139.

Slightly depressed, black, somewhat opaque: clypeus emarginate with three equal tubercles posteriorly: thorax rather sparingly and finely punctate, immaculate: elytra pitchy-black, with the apex pitchy-red, punctate-striate; the interstices punctate: abdomen and legs rufo-piceous.

The slightly depressed form of this species, with its obscure surface, the sparingly punctate thorax, and rufous-tipped elytra, are its chief points of distinction.

Taken in Suffolk, and within the metropolitan district.

Sp. 26. *niger*. *Oblongus, subcylindricus, niger, nitidissimus, clypeo inæquali elytris tenuè punctato-striatis, scutello minuto*. (Long. corp.  $2\frac{1}{2}$  lin.)

Ap. *niger*. *Illiger*.—*Steph. Catal.* 110. No. 1140.

Oblong, subcylindric, black: clypeus angulated, emarginate anteriorly, thickly punctate, with an elevated line on the crown, and an obsolete tubercle on the disc anteriorly: thorax immaculate, thickly punctulated: scutellum minute, smooth: elytra linear, convex, finely punctate-striated, very glossy: body black; legs pitchy-black.

Known by its oblong subcylindric form, glossy surface, slightly punctate-striate elytra, and by the elevated line and single tubercle on the clypeus.

Taken within the metropolitan district, and in other parts of the country.

‡Sp. 27. *bimaculatus*. *Oblongus, niger, clypeo trituberculato, elytris punctato-striatis, maculâ oblongâ baseos rubrâ*. (Long. corp.  $2\frac{1}{3}$  lin.)

Ap. *bimaculatus*. *Fabricius*.—*Steph. Catal.* 110. No. 1141.

Oblong, slightly glossy, black: clypeus angulated, a little marginated, punctulate, with three somewhat obsolete tubercles on the crown; thorax broad, thickly punctured, immaculate: elytra sublinear, slightly convex, deeply punctate-striate, with the interstices very finely punctulate, a large red spot at the base, extending towards the middle of the elytra: body black: legs pitchy-black.

The two distinct red spots at the base of the elytra of this species at once distinguish it from its allies.

Rare: the only indigenous specimens which I have seen are in the collection at the British Museum; they were taken near Windsor, many years ago.

Sp. 28. *granarius*. *Niger, nitidissimus, clypeo subtuberculato, thorace parvè punctato; elytris tenuè punctato-striatis, margine apicis rufescente*. (Long. corp.  $2-2\frac{1}{2}$  lin.)

Sc. *granarius*. *Linné*.—*Steph. Catal.* 110. No. 1142.

Shining black: clypeus submarginated, punctulated, the vertex with a single tubercle on a transverse elevated line: thorax large, very glossy, with the disc very smooth, the lateral margins with some scattered punctures, with an obscure reddish spot in the middle, not extending to the anterior angle: elytra slightly convex, finely punctate-striate, the interstices very smooth, shining, the margin at the apex obscure rusty-red: body pitchy-black: legs rufo-ferruginous; tibiæ obscure.

Ap. *granarius*, amongst other characters, differs by having an obscure rufescent spot towards the middle of the lateral margins of the thorax, the disc of which is but sparingly punctate; the apex of the elytra within is somewhat reddish.

Not uncommon within the metropolitan district; also found in Norfolk and Suffolk. "Hill-ends."—*T. C. Heysham, Esq.* "Near Swansea."—*L. W. Dillwyn, Esq.*

Sp. 29. *emarginatus*. *Ater, clypeo emarginato, subtrituberculato, thorace tenuè punctato, elytris piceis, tenuè punctato-striatis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Ap. *emarginatus mihi*.—*Steph. Catal.* 111. No. 1143.

Black, slightly shining: clypeus somewhat deeply emarginate anteriorly, with three obscure tubercles: thorax rather finely and sparingly punctate, immaculate, glossy: elytra piceous, but little glossy, punctate-striate, the striae rather faint, and the interstices impunctate: abdomen pitchy-black; legs rufo-piceous.

The small size of this species, with its very distinctly emarginated and slightly tuberculated clypeus, sparingly punctate thorax, piceous opaque and faintly striated elytra, serve to discriminate it from its congeners.

Taken near London.

Sp. 30. *melanopus*. *Niger, nitidus, clypeo rugoso, trituberculato, thorace tenuè punctulato, elytris piceo-nigris apice pallidiore, punctato-striatis, pedibus nigris.* (Long. corp. 2 lin.)

Ap. *melanopus*. *Kirby MSS.*—*Steph. Catal.* 111. No. 1144.

Shining black: clypeus emarginated, rugose, with three tubercles posteriorly, and an obsolete curved line in front: thorax rather finely and sparingly punctate, immaculate: elytra pitchy-black, with the apex paler, punctate-striate, the interstices a little elevated and smooth: legs black, with piceous tarsi.

This small species has the legs nearly black, the clypeus rugose anteriorly, with an obsolete curved ridge in front, and three small tubercles behind, of which the latter are nearly of an equal size: the pitchy or rufescent apex to the elytra is also a distinguishing character.

Found occasionally throughout the metropolitan district; also in Suffolk and Norfolk. "Bottisham."—*Rev. L. Jenyns.*

Sp. 31. *borealis*. *Nigro-piceus, nitidus, clypeo vix punctulato, trituberculato, thoracis lateribus anteriùs rufis, elytris leviter punctato-striatis, posteriùs rufo-piceis.* (Long. corp.  $2\frac{1}{4}$  lin.)

Ap. *borealis*. *Gyllenhal.*—*Steph. Catal.* 111. No. 1145.

Pitchy-black, shining: head angulated, black, with an elevated margin on both sides anteriorly, of a translucent ferruginous; above obsoletely punctate, with three tubercles on the vertex, of which the middle one is stoutest, and the lateral ones oblong, and an elevated, curved, abbreviated line anteriorly: thorax convex, short, rather thickly and deeply punctate, with the anterior angles more or less rufescent: scutellum piceous, with an elevated ridge at the

apex: elytra very convex, rather faintly punctate-striate, black with a spot on the shoulders, and the apex rufescent, or entirely of a rufo-piceous hue: body beneath black, with the apex piceous: legs rufo-ferruginous.

The anterior rufous angles of the thorax, impunctate clypeus, and delicately punctate-striate elytra, with rufo-piceous tips, sufficiently characterize this species.

Found occasionally within the metropolitan district: also in Cumberland.

2. With the body somewhat depressed.

Sp. 32. porcus. *Niger obscurus, capite trituberculato, elytris rufo-brunneis, duplicato-striatis.* (Long. corp.  $2\frac{1}{4}$ — $2\frac{1}{2}$  lin.)

Ap. porcus. *Fabricius.*—*Steph. Catal.* 111. No. 1146.

Obscure black: clypeus with three tubercles, the central one longest: thorax black, very thickly punctulated, the anterior margin with a slender pale border: elytra reddish-brown, punctate-striated, the striæ composed as it were of closely approximating pairs, the interstices finely but thickly punctate, with a sericeous hue: abdomen a little glossy beneath, and black: legs piceous, with black femora.

The depressed form of this species, with its red-brown duplicate-striated elytra, at once separate it from the others of this genus.

Not very common; it has been taken near London, but is more usually found in maritime districts. “On Crwmllyn Burrows, not uncommon.”—*L. W. Dillwyn, Esq.* “Ramsgate.”—*Mr. J. Gretton.*

Sp. 33. ruficus. *Niger, capite obsoletè trituberculato, elytris pedibusque rufis, femoribus piceis.* (Long. corp. 2 lin.)

Sc. ruficus. *Marsham.*—Ap. ruficus. *Steph. Catal.* 111. No. 1147.

Black: clypeus with three obsolete tubercles: thorax finely punctured: elytra rufous, punctate-striated, the interstices punctulated: legs rufous, with piceous femora.

Less than the foregoing, of which it may be only a variety: its chief differences consisting in its smaller size, brighter colours, and obsoletely tuberculated clypeus.

Taken in September near Brightwell, by Woodbridge in Suffolk, by Rev. W. Kirby. “On Sketty Burrows (near Swansea), not uncommon.”—*L. W. Dillwyn, Esq.*

Sp. 34. fulvicrus. *Niger, opacus, clypeo obsoletè trituberculato, elytris nigro-piceus punctato-striatis, pedibus nigris, tarsis fulvis.* (Long. corp. 2 lin.)

Ap. fulvicrus *mihi.*—*Steph. Catal.* 111. No. 1148.

Black, opaque, depressed: clypeus somewhat angular, with three obsolete tubercles: thorax rather coarsely punctured throughout, immaculate: elytra piceous black, punctate-striate, the striæ rather wide but shallow, the interstices impunctate: legs black, with fulvous tarsi.

Differs from the two preceding in being smaller, of an obscure black colour, with the elytra piceous black, and punctate-striate, with the interstices impunctate, the legs black, and tarsi fulvous.

Found in Norfolk, and I believe not within the metropolitan district.

*b. With the clypeus not distinctly tuberculated.*

1. The body depressed, with the clypeus entire.

Sp. 35. *rufipes*. *Oblongus, piceus, subtus dilutior, clypeo thoracisque disco lævibus, elytris striatis, tibiis anticis externè tridentatis.* (Long. corp. 4—5 lin.)

Sc. *rufipes*. Linné.—Don. xii. pl. 417. f. 4.—Ap. *rufipes*. Steph. Catal. 111. No. 1149.

Oblong, pitchy: clypeus very large, rounded anteriorly, angulated towards the eyes, smooth, black: thorax smooth, shining, with the lateral edges a little punctate: elytra rather long, shining piceous, striated, the striæ obsoletely crenate-punctate, the interstices convex, smooth, but obscurely punctate towards the base: body beneath, antennæ and legs rufo-ferruginous: anterior tibiæ tridentate.

Variable in colour: known from the following, which it greatly resembles in size and habit, by having the anterior tibiæ strongly tridentate.

Extremely abundant throughout the metropolitan district, and I believe in most parts of the country. I have taken it near Dover, at Brighton, in the Isle of Wight, &c.; and it occurs in Norfolk, Suffolk, Devonshire, Dorsetshire, &c. “Bottisham.”—Rev. L. Jenyns. “Near York and Newcastle.”—W. C. Hewitson, Esq. “Cardew Mire.”—T. C. Heysham, Esq.

Sp. 36. *muticus*. *Oblongus, piceus, subtus dilutior, clypeo thoraceque lævibus, elytris striatis, tibiis anticis externè subunidentatis.* (Long. corp. 5 lin.)

Ap. *muticus mihi*. Steph. Catal. 111. No. 1150.

Oblong, piceous: clypeus large, rounded anteriorly, impunctate; its margin rufescent: thorax transverse, impunctate: elytra oblong, shining piceous, striated, the striæ faintly punctured, the interstices rather convex and not in the least punctate at or towards the base: body beneath, antennæ and legs rufo-piceous, the anterior tibiæ obscurely unidentate.

The obsoletely unidentate anterior tibiæ of this species form its chief point of distinction from the last described, of which it is not improbable it may be only a monstrous variety; though many specimens were taken by Dr. Leach in the north of England.



Occasionally taken within the metropolitan district. "North of England."—*Dr. Leach*, who first detected the peculiarity of this insect.

Sp. 37. *depressus*. *Brevis, niger, thorace punctato, elytris rufis punctato-striatis, interstitiis punctulatis, tarsi rufis*. (Long. corp. 3 lin.)

Ap. *depressus*. *Fabricius*.—*Sowerby*, (*Ent. Trans.*) i. p. 246. pl. fig. sup.—*Steph. Catal.* 111. No. 1151.

Short, black: clypeus large, obsoletely punctate: thorax immaculate; the disc thickly and rather deeply punctate throughout; elytra broad, bright rufous, punctate-striated, the interstices punctulated: legs pitchy-black, with the tarsi rufous.

Elytra sometimes of a piceous red.

The bright rufous elytra of this species well distinguish it from the others of this section; and from *A. fimetarius* and *foetens*, which it resembles in that respect, the absence of tubercles on the clypeus, which is broad and rounded, and its depressed body, readily separate it.

Rare: a single example was found in Richmond Park very many years since; subsequently to which, specimens have occurred in South Wales and in Somersetshire. "Swansea."—*L. W. Dillwyn, Esq.*

Sp. 38. *nigripes*. *Brevis, niger, thorace punctato, elytris punctato-striatis, interstitiis punctulatis, pedibus nigro-piceis, tarsi rufis*. (Long. corp. 3 lin.)

Ap. *nigripes*. *Fabricius*.—*Steph. Catal.* 111. No. 1152.

Short, black, slightly shining: clypeus angulated, finely punctulated, with an obsolete curved line on the crown: thorax with the surface thickly punctulated throughout: elytra broad, finely crenate-striated, the interstices thickly punctulated: body beneath clothed with an ashy pubescence: legs pitchy-black, with the tarsi rufescent.

The black elytra distinguish this insect from the preceding, and its broader form from the dark varieties of the following.

Not uncommon within the metropolitan district, and in other parts of the country. "Bottisham."—*Rev. L. Jenyns*. "Once near York."—*W. C. Hewitson, Esq.* "Not uncommon (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 39. *luridus*. *Niger, thorace punctato, elytris atris subopacis, aut griseis nigro-striatis, interstitiis punctulatis, nigro-maculatis*. (Long. corp. 4—5½ lin.)

Ap. *luridus*. *Fabricius*.—*Steph. Catal.* 111. No. 1153.

Black, slightly glossy: thorax punctate; elytra deep opaque black, punctate-striate, with the interstices punctulate: legs black, with the tarsi rufescent.

Var.  $\beta$ . *Steph. Catal. l. c.* With the elytra black at the base, the apex more or less irregularly striated with griseous.

Var.  $\gamma$ . *Steph. Catal. l. c.* With the elytra griseous, striated with black, with irregular longitudinal streaks of black between.

Var.  $\delta$ . *Steph. Catal. l. c.*—With the elytra griseous, striated with black, the interstices immaculate.

Every possible shade of variation may be obtained in this inconstant species in the proportions of the two colours with which the elytra are covered: in some examples the elytra are of a dull nearly uniform black, while in others they are of a pale lurid griseous, with the striæ alone slightly suffused with dusky: the form of this insect (at least in my very extensive series) is totally different from that of *Ap. nigripes*, which I have no hesitation in considering totally distinct from the present.

Far from uncommon in the neighbourhood of London, and I believe in many other parts of the kingdom. “Near York.”—*W. C. Hewitson, Esq.* “Bottisham.”—*Rev. L. Jenyns.* “Epping.”—*Mr. Doubleday.* “Common (near Swansea).”—*L. W. Dillwyn, Esq.*

2. The body slightly convex; with the clypeus somewhat emarginate.

Sp. 40. *contaminatus.* *Oblongus, niger, æneo nitens, thorace subquadrato, lateribus ciliato, elytris pubescentibus griseis, maculis minoribus fuscis.* (Long. corp  $2\frac{1}{2}$ —3 lin.)

*Ap. contaminatus.* *Fabricius.*—*Steph. Catal.* 112. No. 1154.

Black, with a brassy gloss: clypeus obscurely emarginate in front, the disc smooth, with an oblong testaceous spot within the anterior margin on each side: thorax large, subquadrate, with the angles rounded, the anterior with a testaceous spot; the lateral margins ciliated with long hairs, the disc very smooth: elytra griseous, densely clothed with a short cinereous pile, punctate-striated, with an elongate stria beneath the shoulders, a small spot adjoining the apex of the latter, and two double ones on the disc, in the middle towards the suture, one behind the other: body beneath pitchy, with the apex pale: legs pale, with the joints dusky.

The ciliated lateral margins of the thorax of this species at once point out its distinction.

Most abundant, not only throughout the metropolitan district, but throughout the kingdom, frequenting high roads, where scattered dung abounds, and flying about in the sun during the day, so early as February or March, and continuing throughout the summer. “Common near Swansea.”—*L. W. Dillwyn, Esq.*

“Bottisham.”—*Rev. L. Jenyns*. “Near Yarmouth.”—*W. C. Hewitson, Esq.*

Sp. 41. prodromus. *Oblongus, niger: clypeo lævi, thorace transverso, elytris pubescentibus griseis, plagâ magnâ fuscâ.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{4}$  lin.)

Ap. prodromus. *Creutzer*.—*Steph. Catal.* 112. No. 1155.

Oblong, black: clypeus large, smooth: thorax short, transverse, slightly convex, the disc smooth, glossy black, the lateral margins broadly pale and a little punctate: elytra broad, clothed with an ashy pubescence, punctate-striate; the interstices posteriorly thickly punctulated, anteriorly less so; pale griseous, with the suture rather dusky, and a large fuscous spot on the disc, attenuated anteriorly towards the shoulder: body black, with the apex reddish: legs pale.

Differs from the next in having the clypeus and thorax impunctate, the former with scarcely a vestige of tubercles on its vertex.

Not uncommon near London: also found at Bristol, in Devonshire, Cornwall, &c. “Bottisham.”—*Rev. L. Jenyns*.

Sp. 42. sphacelatus. *Oblongus, niger, vertice lineâ impressâ, clypeo thoraceque punctatis, elytris glabris griseis, plagâ fuscâ.* (Long. corp. 2—3 lin.)

Sc. sphacelatus. *Pauzzer*.—*Don. xii. pl. 417. f. 2.*—Ap. sphacelatus. *Steph. Catal.* 112. No. 1156.

Oblong, black, glabrous: clypeus rather thickly and deeply punctured, with a transverse curved line on the vertex: thorax also thickly and deeply punctured, with the lateral margin pale: elytra glabrous, with a dusky discoidal patch, of variable size: abdomen pitchy-black, with the apex rather paler.

From Ap. prodromus, the punctate clypeus and thorax readily distinguish this species; and the glabrous elytra, as well as the obsolete curved line on the clypeus, are also essential points of difference.

Variable both in size and colour; some examples having the patch on the disc of the elytra of a darker hue than others.

Common in horse-dung that is readily scattered by the wind, throughout the metropolitan district, especially towards the early part of the year. “Great Barrock.”—*T. C. Heysham, Esq.* “Bottisham.”—*Rev. L. Jenyns*. “Common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 43. marginalis. *Oblongus, niger: clypeo obsolete trituberculato, thorace punctato, margine omni pallido, elytris griseis, plagâ magnâ fuscâ.* (Long. corp.  $1\frac{3}{4}$ —3 lin.)

Ap. marginalis *mihi*.—*Steph. Catal.* 112. No. 1157.

Oblong, black; clypeus very obsoletely tuberculated, the central one most distinct: thorax very sparingly punctured on the disc, black, with all the

margins pale: elytra slightly pubescent, with a large discoidal fuscous patch; punctate-striated, the interstices punctulated: body beneath black, with the apex pale: legs pale.

The pale margins to the thorax, obsoletely trituberculated clypeus, and punctate thorax, well characterize this species.

Variable in bulk; but generally much smaller than the foregoing.

Found not uncommonly within the metropolitan district. I have also received it from Bristol. “Bottisham.”—*Rev. L. Jenyns*.

‡ Sp. 44. Pecari. *Ater, nitidus, elytris striatis rufis maculâ communi dorsali nigrâ, pedibus rufis.* (Long. corp. 3 lin.)

Ap. Pecari. *Fabricius*.—*Steph. Catal.* 112. No. 1158.

Glossy, black; clypeus large, entire: thorax rather delicately but sparingly punctate on the lateral margins towards the anterior angles: elytra rufous, with the suture black, which colour expands a little before the middle into a large dorsal patch common to both elytra, which are punctate-striated, with smooth and flat interstices: body beneath black: legs bright rufous.

Distantly resembling Ap. fimetarius or depressus, but known from both by the black dorsal patch, and from the former by the clypeus not being tuberculated.

The only indigenous examples I have seen of this conspicuous species are in the collection of the British Museum: they were captured, I believe, in the neighbourhood of Windsor.

Sp. 45. merdarius. *Niger, clypeo subemarginato, thoracis angulis anticis subferrugineis, elytris testaceis, suturâ nigrâ.* (Long. corp. 2 lin.)

Sc. merdarius. *Olivier*.—*Martyn, C. pl.* 4. f. 34.—Ap. merdarius. *Steph. Catal.* 112. No. 1159.

Black, shining: clypeus large, obscurely emarginated: thorax convex, glossy black, smooth, with the anterior angle, and sometimes the lateral margins, testaceous; elytra punctate-striate, yellow-testaceous, with the suture black, and the lateral margin rather dusky; body black; legs piceous, or testaceous. Known by its small size, bright testaceous-yellow elytra, with a broad black suture, and the anterior margins of the thorax being more or less testaceous.

Not common throughout the metropolitan district, and in other parts of the south of England. “Bottisham.”—*Rev. L. Jenyns*. “Near York.”—*W. C. Hewitson, Esq.* “Very common, except on the seashore (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 46. phæopterus. *Ater, nitidus, elytris pedibus thoracisque lateribus rufopiceis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Sc. phæopterus. *Marshall MSS.*—Ap. phæopterus. *Steph. Catal.* 112. No. 1160.

Shining black, beneath piceous: clypeus smooth: thorax very thickly but finely

punctulated, with the lateral margins rufescent, or pitchy: elytra of a pitchy-red, rather faintly striated, the striæ a little punctate; legs pitchy-red.

From all the foregoing species this differs by its minute bulk, and in having the lateral margin of the thorax, the elytra and legs, pitchy-red.

Rare: found in Suffolk, near London, and at Tunbridge Wells.

Sp. 47. *pusillus*. *Ater, nitidus, clypeo lævis, thorace punctulato, elytris punctato-striatis toto rufo-ferrugineis, femoribus rufo-piceis*. (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Ap. *pusillus*. *Herbst. ?—Steph. Catal. 112. No. 1161.*

Glossy black: clypeus obsoletely emarginate, smooth: thorax thickly and rather deeply punctured, immaculate: elytra punctate-striate, with the interstices subpunctated, entirely of a rufo-ferruginous or piceous colour; body piceous beneath: femora rufo-piceous; tibiæ and tarsi rufous.

From the preceding this species differs in having the thorax entirely black, the elytra rather deeply punctate-striate, and in its greater bulk—from the following by the clypeus being smooth, the anterior angles of the thorax black, and the elytra entirely rufous.

Far from rare in the neighbourhood of London: I have also found it near Dover, and have received it from Somersetshire.

Sp. 48. *granum*. *Niger, clypeo lineâ elevatâ, thorace crebrè punctulato, elytris punctato-striatis, apice latè rufis*. (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

Ap. *granum*. *Gyllenhal.—Steph. Catal. 112. No. 1162.*

Black, a little shining: clypeus punctulated, the vertex with a more or less obsolete elevated line, but not tuberculated: thorax convex, black, the anterior angles rufous: elytra deeply punctate-striate, with the interstices impunctate, the apex more or less rufo-ferruginous: femora piceous; tibiæ and tarsi ferruginous.

Larger than the foregoing insect, from which it differs in having an elevated line on the clypeus, with the anterior angles of the thorax rufous, and the apex alone of the elytra of this last colour:—from the following species it differs by not having the entire lateral margins of the thorax rufous, and by the elytra being more deeply striate.

Common throughout the metropolitan district, and I believe in many other places.

Sp. 49. *cænosus*. *Ater, nitidus, thorace punctato, margine laterali rufo, elytris obscure rufis striatis*. (Long. corp. 2 lin.)

Ap. *cænosus*. *Pauzer.—Steph. Catal. 112. No. 1163.*

Glossy black: clypeus punctate, a little emarginated anteriorly: thorax punctured, with the lateral margins more or less rufous: elytra dull-rufous, with the humeral angles paler, finely striated, the striæ very obsoletely punctate: body black beneath: legs fuscous, or rufo-piceous.

Somewhat resembling *Ap. phæopterus*; but from that insect it differs in being considerably larger, in having the clypeus punctate, the thorax more deeply punctured in proportion to its bulk: the elytra of a darker hue, and the legs more or less fuscous:—from the allied dark-coloured species, the pale lateral margins of the thorax distinguish it.

Taken near London; at Brighton, Shoreham, &c. “Near Whitburn, Northumberland.”—*W. C. Hewitson, Esq.*

Sp. 50. *tristis*. *Niger, clypeo lineâ elevatâ subtuberculatâ, thorace immaculato punctulatissimo, elytris striatis, interstitiis punctulatis.* (Long. corp. 2 lin.)  
Sc. *tristis*. *Zenker*.—*Ap. tristis*. *Steph. Catal.* 112. No. 1164.

Black, shining: clypeus punctulated, the vertex with an obsolete carina, and an indistinct tubercle on each side: thorax convex, black, immaculate: elytra deeply punctate-striated, with the interstices somewhat punctured; the suture, a spot on the shoulders, and the apex more or less rufo-ferruginous: legs pitchy-black, with the tibiæ and tarsi rufo-picéous; posterior tibiæ compressed, bent, and considerably dilated beneath.

From the three foregoing species, this may be known by its punctulated elytra, black thorax, and curved, dilated, posterior tibiæ.

Found within the metropolitan district, and in Somersetshire. “Swansea, I believe, is not uncommon.”—*L. W. Dillwyn, Esq.*

Sp. 52. *quadrinaculatus*. *Convexus, niger, nitidus, thorace immaculato, elytris puncto humerali maculâque posticâ rubris.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)  
Sc. *quadrinaculatus*. *Linné*.—*Don*. ii. pl. 70. f. 3.—*Ap. 4-maculatus*. *Steph. Catal.* 112. No. 1165.

Short, convex, shining black: clypeus angulated, anteriorly depressed, punctulated: thorax thickly punctured, immaculate: elytra punctate-striate, with the interstices finely punctured; a small red spot on the shoulders, and towards the apex a large orbiculate one: body and legs black; tarsi rufescent. The humeral spot on the elytra is sometimes produced into an abbreviated streak.

†Sp. 51. *quadriguttatus*. *Oblongus, niger, thoracis lateribus, elytrorum maculis quatuor, pedibusque rufis.* (Long. corp.  $1\frac{1}{2}$  lin.)  
*Ap. quadriguttatus*. *Illiger*. K. i. 35.—*Fabricius*, S. E. i. 78. (!)

Black; thorax smooth, shining; the lateral margin obscure rufous: elytra obsoletely striated; the interstices smooth, each elytron with two rufous spots, the anterior angulated, the posterior rounded: legs also rufous.

*Fabricius* gives this species as a native of England, but I have never seen an indigenous specimen.

The small size of this insect, combined with its bright red spotted elytra and immaculate thorax, at once distinguishes it from its congeners.

Rare near London; it has however been taken in the warren at Coombe-wood, and near Windsor: and in Norfolk and Somersetshire, in June. "Near Swansea, not common."—*L. W. Dillwyn, Esq.*

Sp. 53. *plagiatus*. *Oblongus, subcylindricus, niger, elytris tenuè punctato-striatis, plagâ rufescente.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Sc. *plagiatus*. *Linné*.—Ap. *plagiatus*. *Steph. Catal.* 112. No. 1166.

Oblong, subcylindric, black, slightly glossy: clypeus angulated, with an obsolete elevated line behind: thorax thickly but not coarsely punctured, immaculate: elytra rather faintly punctate-striate, with an elongate red dash on the disc towards the suture: body beneath and legs black; tarsi pitchy.

The conspicuous red dash on the elytra of this species serves, exclusively of other distinguishing characters, to separate it from its allies.

First taken near Wisbech in Cambridgeshire by Mr. Weatherhead, and subsequently during a flood in the marshes near Peterborough by Mr. William Skrimshire: it is, however, rare.

Sp. 54. *arenarius*. *Brevis, convexus, niger nitidus, elytris punctato-striatis, posticè dilatatis, apice sulcatis piceis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ap. *arenarius*. *Illiger*.—*Steph. Catal.* 113. No. 1167.

Short, convex, shining black: clypeus convex, emarginated, punctured: thorax immaculate, punctured: elytra dilated posteriorly, very convex, pitchy-black, with the lateral edge and apex sometimes ferruginous; punctate-striate, the striæ expanded and deeper towards the apex, the interstices a little punctate: body beneath piceous, with the apex palest; legs pitchy-ferruginous.

The breadth of the hinder portion of the elytra, with their sulcated striæ, the short, convex body, and small size, distinguish this insect.

Also a rare species; found principally in sandy districts near the coast: but it has occurred abundantly on Newmarket-heath. "Rarely found by the seashore (near Swansea), but much more common inland."—*L. W. Dillwyn, Esq.*

Sp. 55. *Scrofa*. *Ovatus, subdepressus, niger obscurus, pubescens, elytris punctato-striatis, interstitiis rugoso-punctatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Ap. *Scrofa*. *Fabricius*.—*Steph. Catal.* 113. No. 1168.

Ovate, somewhat depressed, obscure black, pubescent: clypeus large, rounded, entire; thorax slightly convex, thickly punctate, pubescent: elytra punctate-striate, the interstices subrugose, with larger impressed spots, pitchy-black; with the apex rather paler: body black; legs rusty piceous.

The large clypeus, subrugose, pubescent, elytra and small size of this species, are its most evident characters.

Apparently a rare species: I possess a single example from the Marshamian cabinet only. "Pentire Point, Cornwall."—*Dr. Leach*.

† Sp. 56. villosus. *Oblongus, subdepressus, ferrugineo-piceus, pubescens, elytris obsoletè sulcatis*. (Long. corp.  $1\frac{1}{2}$  lin.)

Ap. villosus. *Gyllenhal*.—*Curtis*, i. pl. 27.—*Steph. Catal.* 113. No. 1169.

Oblong, somewhat depressed, ferruginous, shining: clypeus angular, scarcely emarginated, narrowed before, punctured: thorax slightly convex, pubescent, thickly punctured, with a smooth line down the middle, piceous, with the lateral margins paler: elytra a little convex, pilose, fusco-piceous, darkest on the back, with seven broad sulci, each with a row of punctures on the sides; the interstices flat, smooth: beneath piceous, with the tip of the abdomen and legs palest.

Differs from the following, which it somewhat resembles in colour, by the elytra being obsoletely sulcate and spotless.

The only known indigenous specimen of this insect was found dead upon Newmarket-heath in the month of August many years since.

Sp. 57. Sus. *Oblongus, depressus, obscurè rufus, pubescens, elytris griseis lineis duabus elevatis nigro tessellatis*. (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{2}$  lin.)

Sc. Sus. *Fabricius*.—Ap. Sus. *Steph. Catal.* 113. No. 1170.

Oblong, depressed, dull rufous or ochraceous: clypeus large, truncate, punctulated, with the vertex fuscous: thorax but little convex, thickly but rather finely punctate, pubescent, rufous, with the disc, and a spot on the side, dusky; elytra griseous, pubescent, with broad, rather deep, scarcely punctate sulci, with the interstices elevated, smooth; the second and fourth from the suture with a row of oblong-quadrate, more or less confluent, black spots: body and legs rufo-fuscous, with the femora paler.

Rather variable in colour, and in the intensity of the colour of the black spots on the elytra; but these characters, united to the costate elytra, serve to distinguish the species.

Rare near London; but more frequent in the western counties: it has also been found near Norwich. "Taken most abundantly, by J. Rawlins, Esq., in a field by Rivelstone-wood, near Edinburgh."—*Dr. Leach*. "Common (near Swansea), about the seaside, particularly at the end of summer."—*L. W. Dillwyn, Esq.*

Sp. 58. testudinarius. *Subdepressus, niger, obscurus, pubescens, elytris sulcatis piceis maculis sparsis ferrugineis*. (Long. corp.  $1\frac{1}{2}$ —2 lin.)



*Sc. testudinarius*. *Fabricius*.—*Don*. ii. pl. 70. f. 1.—*Ap. testudinarius*. *Steph. Catal.* 113. No. 1171.

Somewhat depressed, obscure, black: head and thorax very thickly and rather coarsely punctured, slightly pubescent; the clypeus a little emarginated: elytra oblong, rather convex, piceous, with paler, somewhat ferruginous, rounded spots on the disc, deeply sulcate, the sulci obsoletely punctate, the interstices narrow, carinated: body and femora black: tibiæ and tarsi ferruginous.

The prettily spotted sulcate elytra of this insect, with its small size and obscure pubescent surface, are sufficient characters to discriminate it from all the foregoing: it closely resembles some of the *Psammodii* in habit.

Found in sandy situations near the metropolis, most abundantly during the spring: on Hampstead-heath I have taken it most copiously in April. "Fields near Bow, Essex, in company with *A. inquinatus* in profusion, in February; Hampstead-heath and Coombe."—*Mr. Ingpen*.

#### GENUS CXC VII.—PSAMMODIUS, *Gyllenhal*.

*Antennæ* with the basal joint robust, oblong, subfusiform; the second subglobose; the third slender, subclavate; the three following somewhat cup-shaped, the remainder forming a triphyllous laminated club, the terminal joint of which is oval. *Palpi*, *maxillary* with the third joint very short, the terminal about three times as long, subovate: *labial* short, with the terminal joint large, ovate; *head* broad, with the *clypeus* generally notched: *body* oblong-ovate, generally convex: *tibiæ* with the apex considerably dilated.

The principal distinctions between *Psammodius* and *Aphodius* consist in the former having the mandibles more corneous, the terminal joint of the palpi dilated, and the third of the maxillary very short, the third joint of the antennæ somewhat pear-shaped, with the terminal ovate, and the tibiæ much dilated at the apex:—all the species delight in sandy districts, chiefly near the coast.

##### A. With the thorax not sulcated transversely.

Sp. 1. *elongatus*. *Oblongus, subdepressus, niger nitidus, clypeo emarginato, thorace punctato, elytris crenato-striatis, interstitiis lævibus*. (Long. corp.  $2\frac{1}{2}$  lin.)

*Ps. elongatus mihi*.—*Steph. Catal.* 113. No. 1172.

Oblong, somewhat linear, rather depressed, shining black: clypeus deeply emarginated anteriorly, convex, with a few scattered punctures: thorax rather coarsely, but not very thickly punctured: elytra elongate, depressed on

the back, crenate-striated, the interstices flat and impunctate: body beneath black; legs rufo-piceous.

Larger than the following, from which it is distinguished by its elongate form, deeply emarginated clypeus, depressed elytra and less punctate thorax.

I possess a single specimen of this insect, which I obtained from the Marshamian collection:—I believe there is a second in the British Museum.

Sp. 2. Sabuleti. *Atro-piceus, oblongus, clypeo integro thoraceque crebrè punctatis, elytris profundè punctato-striatis.* (Long. corp. 2 lin.)

Aph. Sabuleti. *Illiger.*—Ps. Sabuleti. *Steph. Catal.* 113. No. 1173.

Oblong, pitchy-black, shining: clypeus punctulated, broad, transverse, entire, with the angles rounded: thorax thickly and deeply punctate: elytra oblong, convex, deeply punctate-striate: legs black, or piceous, with the anterior tibiæ and tarsi rufescent.

Ps. Sabuleti may be known by the integrity of the clypeus, the thickly and deeply punctured thorax, and its deeply punctate striated elytra.

Rare: I possess a specimen from the neighbourhood of Bristol, and two which were captured near “Crickhowel, on the banks of the Usk.”—*Marsham.*

Sp. 3. porcatus. *Piceo-niger, subobscurus, thorace punctato subcanaliculato, elytris profundè sulcatis, sulcis punctis impressis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Sc. porcatus. *Fabricius.*—Ps. porcatus. *Steph. Catal.* 113. No. 1174.

Slender, subcylindric: clypeus obsoletely emarginated, acutely angulated before the eyes: thorax very deeply punctulated, with a rather deep abbreviated longitudinal furrow behind: elytra very deeply sulcate, the interstices narrow, smooth, the sulci with a series of large impressions; beneath piceous: legs piceous, with the femora dusky and the tarsi rufescent.

Much smaller than either of the foregoing, from which the abbreviated longitudinal furrow on the thorax at once distinguishes it; and the want of oblique ones on the lateral margin shows its distinction from *B. cæsus*.

Not unfrequently taken near London in the spring: during April last, it was in plenty in my garden at South Lambeth, and in Larkhall-lane and the adjoining fields: it occurs also in Norfolk. “At the Mumbles (near Swansea), by Dr. Leach.”—*L. W. Dillwyn, Esq.*

Sp. 4. cæsus. *Cylindricus, niger, clypeo subemarginato, margine antico pallido, thorace punctato, utrinque sulcis duobus obliquis abbreviatis, elytris punctato-striatis, pedibus piceis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Aph. cæsus. *Fabricius.*—Ps. cæsus. *Steph. Catal.* 113. No. 1175.

Cylindric, black, shining: clypeus somewhat emarginate, finely punctured, with the anterior margin pale: thorax rather coarsely punctate, with two oblique sulci on each side, one arising at the anterior angle, the other behind the middle, and an abbreviated longitudinal one behind: elytra elongate, rather deeply punctate-striate: abdomen black; legs piceous.

From *Ps. porcatus* this species may be known by its more elongate cylindric form, and by the oblique abbreviated sulci on the lateral margins of the thorax.

A rare species, at least towards the eastern parts of Britain; in the western it appears to be more abundant. “Near Bristol and Pentire Point, Cornwall.”—*Dr. Leach*.

B. With the thorax sulcated transversely.

Sp. 5. asper. *Oblongus, fusco-niger obscurus, thorace transversim rugoso, elytris punctato-striatis, interstitiis granulatis.* (Long. corp.  $1\frac{3}{4}$  lin.)

Ap. asper. *Fabricius*.—*Ps. asper.* *Steph. Catal.* 113. No. 1176.

Oblong, dull fuscous-black: clypeus angulated, deeply emarginated, convex, the margins ferruginous, the vertex obliquely sulcated: thorax short, convex, ciliated laterally and behind, with four transverse elevated costæ, the two posterior of which are sinuated and interrupted in the middle: elytra linear-elongate, punctate-striate, the interstices thickly granulated: body piceous; antennæ and legs somewhat ferruginous.

The granulated interstices between the striæ on the elytra at once separate this species from the following.

Also a local species; found in the west of England: my specimens were captured “Near Bristol.”—*Dr. Leach*.

Sp. 6. sulcicollis. *Ovatus, niger, nitidus, thorace transversim rugoso, elytris posterius gibbosis, crenato-striatis, interstitiis levibus.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ap. sulcicollis. *Illiger*.—*Ps. sulcicollis.* *Steph. Catal.* 113. No. 1177.—*Curtis*, vi. pl. 258.

Ovate, black, shining: clypeus emarginated, rugose, rufo-piceous anteriorly: thorax with five transverse ridges, the furrows between slightly crenated, the posterior ones interrupted by a longitudinal fovea: elytra very convex, considerably dilated behind, deeply crenate-striate, with the interstices flat and smooth: body and legs rufo-piceous.

Variable in colour: some examples being of a piceous or castaneous hue, depending upon the state of maturity.

Taken not unfrequently near Swansea in the summer, and probably also in Suffolk. “On Crwmllyn Burrows;—and towards

sunset, on a fine summer's evening, is often found in considerable numbers climbing up the sand-hills."—*L. W. Dillwyn, Esq.*—"Weston-super-Mare."—*G. Waring, Esq.*

### FAMILY XXVIII.—TROGIDÆ, *MacLeay*.

*Antennæ* short, nine or ten-jointed; the basal joint thick; the capitulum triphyllous, ovate, transverse, the disc of the lamellæ frequently convex. *Labrum* exerted, coriaceous: *mandibles* corneous, thick, stout, with the apex very acute: *maxillæ* corneous: *palpi* rather short; *labial* with the terminal joint somewhat thickened and ovate: *head* subquadrate: *clypeus* short, convex anteriorly: *thorax* transverse: *elytra* ample, gibbous, arched, deflexed on the sides and at the apex; *body* ovate, very gibbous, flat beneath: *legs* short, stout; *tibiæ* compressed, anterior slightly dentate without: *tarsi* short: *claws* simple.

The Trogidæ inhabit sandy places, and their food is supposed to consist of the tendinous portion of nearly dried carcasses, from the insects having been frequently captured on old bones, horns, &c.: there is great analogy between them and the Histri; like those insects the head is deeply sunk in the thorax, and they counterfeit death when touched, by applying the antennæ and legs close to the body, and seeming without motion till their alarm ceases:—from the Geotrupidæ the distinctly laminated club of their antennæ distinguishes them; and from the preceding and following families, and the Scarabæidæ, their exerted labrum.

The following are the British genera:—

<i>Tarsi</i>	{	omnes 5-articulati. <i>Antennæ</i>	9-articulatæ:	198. <i>ÆGIALIA</i> .
			10-articulatæ:	200. <i>Trox</i> .
		postici 4-articulati:	.	199. <i>Trachyscelis</i> .

### GENUS CXCVIII.—ÆGIALIA, *Latreille*.

*Antennæ* nine-jointed; the basal joint robust, cylindric, scarcely pilose; second also stout, obconic; third slender, rather long, somewhat pear-shaped; three following very short, transverse, the remainder forming an acute triphyllous club. *Palpi* slender, the terminal joint of the *maxillary* elongate, attenuated: *labrum* linear-transverse, very short: *mandibles* with the apex bifid: *head* rounded, inflexed: *thorax* rounded, with the sides inflexed: *body* short, ovate, very gibbous behind: *legs* short, stout; *anterior tibiæ* strongly tri-

dentate without; *posterior* very robust, with dilated spoon-shaped spurs: *tarsi* short, with minute *claws*.

*Ægialia* is distinguished by having the antennæ nine-jointed only, the body considerably dilated, and nearly globular, behind; the mandibles bifid; the palpi slender, with the terminal joint of the maxillary attenuated; the antennæ free, with the basal joint cylindric and nearly naked: the only known species frequents the vicinity of the coast.

Sp. 1. *globosa*. *Nigra nitida, clypeo granulato, thorace lævissimo, elytris striatis, impunctatis*. (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{4}$  lin.)

Ap. *globosus*. *Illiger*.—*Æg. globosa*. *Steph. Catal.* 114. No. 1178.—*Sc. globosus*. *Donovan*, xiv. pl. 470.

Shining black: clypeus semiorbiculate, with elevated rough eminences: thorax very smooth, impunctate: elytra glossy black, with the suture piceous, rather faintly striated, the striæ impunctate: body beneath rusty-piceous; legs the same: antennæ and mouth ferruginous.

Variable in size and in colour; some examples being more or less ferruginous, or testaceous; arising, most probably, from their state of maturity.

Not uncommon on most of the coasts of Great Britain during the summer months. “Southend.”—*Rev. F. W. Hope*. “Seashore, South Shields, abundant.”—*G. Wailes, Esq.* “Extremely common on the sand-hills every where (near Swansea).”—*L. W. Dillwyn, Esq.* “Sands between Leith and Musselburgh.”—*Dr. Leach*. “Yarmouth.”—*W. C. Hewitson, Esq.*

#### GENUS CXCIX.—TRACHYSCELIS, *Latreille*.

*Antennæ* scarcely longer than the head, the basal joint elongate; the third and two following very small; the remainder forming an abrupt, short, laminate-perfoliate six-jointed club. *Palpi* thickened outwardly, with the terminal joint largest, somewhat obtrigonal: *labrum* transverse; slightly exserted, with the tip entire: *head* broad: *thorax* transverse: *body* very convex: *legs* very stout: *tibiæ* obtrigonal, furnished above with very numerous spines: *tarsi* with the first joint longer than the intermediate.

This singular genus, whose location is less natural than could be wished, is distinguished from all the other lamellicorn insects by having the tarsi heteromorous, the four anterior ones being five-jointed, and the two posterior four-jointed only: the structure of the antennæ is also different, as is also the form of the terminal joint of the palpi:—the indigenous species inhabits sandy districts.

Sp. 1. *Aphodioides*. *Niger, nitidus; elytris striatis, antennis pedibusque dilutobrunneis*. (Long. corp.  $1\frac{1}{4}$  lin.)

Tr. *Aphodioides*. *Latreille*.—*Steph. Catal.* 114. No. 1179.

Black, shining: thorax deeply punctate: elytra striated: antennæ and legs pale-brown.

I possess a fragment only of this singular insect, which I obtained from the collection of Mr. Marsham.

A single perfect example only of this insect has come beneath my observation; it was taken as mentioned below, and is in the collection of the British Museum:—the locality of my injured specimen I know not. “In the New Forest, near Lyndhurst.”—*Mr. D. Bydder*.

#### GENUS CC.—TROX, *Fabricius*.

*Antennæ* concealed during repose beneath the sides of the thorax, anteriorly, ten-jointed; the basal joint very large, subconic, a little bent, and clothed with rigid hairs; second also stout, subglobose; five following short, rather slender, the third the longest; the remainder forming a triphyllous club, with the lamellæ rather long. *Palpi* rather stout, the terminal joint ovate: *labrum* semicircular, hairy: *mandibles* with the apex bent, acute: *head* short, deeply sunk in the *thorax*, which [is] sinuated behind, and rugose: *body* subovate, very rugged, convex, flat beneath: *legs* short, stout, generally pilose: *tibiæ* with acute spurs at the apex: *tarsi* short; *claws* rather large.

As a genus, *Trox* may be known from the foregoing by having the basal joint of its antennæ very robust and pilose, the antennæ themselves concealed during the repose of the insect beneath the anterior angles of the thorax, the body curved and very rugose; the mandibles with the apex acute, simple, the claws rather large; the labrum semicircular, &c.:—like the rest of the family, they chiefly inhabit sandy or gravelly places during the spring.

Sp. 1. *sabulosus*. *Niger, thorace inæquali, elytris substriatis, interstitiis alternis elevationibus fusciculato hispidis*. (Long. corp.  $4-4\frac{1}{2}$  lin.)

Sca. *sabulosus*. *Linné*.—*Martyn, pl.* 3. f. 26.—Tr. *sabulosus*. *Steph. Catal.* 114. No. 1180.

Black: clypeus semiorbiculate, punctate: thorax very unequal, channelled, thickly punctured, and bordered throughout with rufous cilia: elytra coarsely punctate-striate, with the alternate interstices more elevated, and adorned with short tufts of red-brown hairs, but less evident on the disc.

Larger than the two following species, from which it may be known by having the clypeus semiorbicular, the elytra more rugose and deeply striated, &c.

In the neighbourhood of London this species is usually found in the gravel-pits of Coombe-wood and Wimbledon. I have, however, taken the insect in other places, but it never appears to be abundant. “Sundridge, Kent.”—*Mr. Ingpen*. “Spitchweek.”—*Dr. Leach*. “On Newmarket and Gamlingay heaths.”—*Rev. L. Jenyns*.

Sp. 2. *arenosus*. *Niger, thorace inæquali, clytris substriatis, interstitiis alternis tuberculis lævibus, apice longius fasciculato-pilosus*. (Long. corp.  $3\frac{1}{2}$  lin.)

Tr. *arenosus*. *Gyllenhal*, i. 11.—*Steph. Catal.* 114. No. 1181.

Less than the last: black: clypeus slightly acuminate in front, punctulated: thorax unequal, channelled, punctured: elytra very obsoletely striated, with a series of distinct subconic tubercles in each alternate interstice, anteriorly smooth, shining, posteriorly furnished with tufts of rather long rigid cinereous hairs: body and legs rather glossy-black.

The smaller size of this species, with the form of its clypeus, and the more obsoletely striated elytra, are its chief distinctions from the foregoing.

Taken, though rarely, within the metropolitan district, and in other parts. “In carrion on the sand-hills (near Swansea) not common.”—*L. W. Dillwyn, Esq.* “Lowestoft, Suffolk.”—*W. C. Hewitson, Esq.*

Sp. 3. *scaber*. *Niger obscurus, clytris punctato-striatis, interstitiis omnibus punctis fasciculato-pilosus*. (Long. corp. 3 lin.)

*Silpha scabra*. *Linné*.—Tr. *arenarius*. *Steph. Catal.* 114. No. 1182.

Dull black, or fuscous: clypeus rounded, punctate: thorax a little convex, obsoletely channelled, punctulated: elytra oblong, punctate-striate, each interstice with a row of reddish-brown tufts of hair, of which the alternate series are largest: body and legs piceous.

Smaller than either of the other species, and known by each interstice between the striæ having a row of pilose tufts.

Not uncommon within the metropolitan district; in April last I captured several specimens flying in my own garden at South Lambeth. “A pair taken at Bottisham, in decayed wood.”—*Rev. L. Jenyns*. “Scarborough.”—*W. Bean, Esq.*

† Sp. 4. *lutosus*. *Fusco-cinereus, clytris elevato-striatis lineatisque, fronte marginatâ acutâ*. (Long. corp. 6 lin.)

Sc. *lutosus*. *Marshall*.—Tr. *lutosus*. *Steph. Catal.* 114. No. 1183.

Ashy-brown: head angulated, elevated in the middle, with the forehead mar-

gined, acute: antennæ pale: thorax somewhat rugged, obsoletely five-lobed behind, with the intermediate angle acute: elytra striated, with four striæ of elevated oblong spots, the anterior series with elevated punctate lines: anterior tibiæ simple.

The only known example of this insect, which is in Mr. Kirby's cabinet, was taken by the late Rev. P. Lathbury, I believe during a flood at Livermere in Suffolk.

### FAMILY XXIX.—DYNASTIDÆ, *MacLeay*.

*Antennæ* ten-jointed; the basal joint very robust, conic, hairy; the second subglobose; the five following very short; the remainder forming a short, ovate, triphyllous capitulum. *Labrum* membranaceous, generally concealed beneath the clypeus, its margin frequently ciliated: *mandibles* convex, subtrigonal, with the base thick; the apex obtuse: *maxillæ* corneous: *palpi* with the terminal joint ovate, the basal joint of the *maxillary* minute: *head* subtrigonal; *clypeus* frequently horned: *thorax* sometimes horned: *elytra* not covering the apex of the *abdomen*, which is generally pubescent: *body* large, convex, rather elongate-ovate: *legs* stout; *tibiæ* broad, anterior considerably dentate: *tarsi* rather long.

The Dynastidæ live either in rich vegetable mould, or in the putrid detritus which results from the decomposition of trees; they differ from the Trogidæ by having the labrum concealed, and in general by their gigantic bulk.

The reputed indigenous genera may be known by the following concise definitions:

<i>Maxillæ</i> {	inermes :	.	.	.	.	.	201. ORYCTES.
	dentatæ :	.	.	.	.	.	202. DYNASTES?

### GENUS CCI.—ORYCTES, *Illiger*.

*Antennæ* with the basal joint very robust, clavate, pilose; the second smaller, subglobose; the third still less, globose; the four following transverse, very short; the remainder forming a triphyllous plicatile club. *Palpi* with the terminal joint oval: *mandibles* with their external edge without teeth: *maxillæ* entire, one-lobed, ciliated: *mentum* ovate, pilose: *head* triangular, cornuted: *thorax* retuse, with the sides dilated and a little rounded: *body* ovoid, convex, pilose: anterior *tibiæ* tridentate externally; posterior ciliated.

From *Dynastes*? this genus is distinguished by having the terminal joint of the palpi ovate and not attenuated, the mandibles



and maxillæ unarmed, mentum ovate, head cornute, thorax retuse, &c.

‡Sp. 1. *nasicornis*. *Castaneus, clypeo cornuto, thorace retuso carinâ posticâ subtridentatâ, elytris politis, subtilissimè punctato-striatis*. (Long, corp. 1 unc. 1—3 lin.)

Sc. *nasicornis*. Linné.—Or. *nasicornis*. Steph. Catal. 114. No. 1184.

Castaneous or fuscous, shining: head with a single horn, which in the male is elongate, conic, recurved, the anterior margin of the clypeus abruptly produced in the middle and truncate; the thorax in both sexes retuse anteriorly; and in the male the hinder margin of the retuse portion is produced into a transverse obsoletely tridentate carina: elytra very glossy, finely and distantly punctulated.

The only known indigenous specimen of this insect was taken “alive by a bricklayer, amongst old timber, on pulling down the roof of a building at Chelsea.”—*Haworth in Entomological Transactions, vol. i. p. 76*. I think it very doubtful whether this fine species be really indigenous, as it appears highly probable that the specimen above alluded to may have been imported amongst some of the continental plants which abound in the above vicinity, and the insect occurs very copiously in rotten bark, the refuse of conservatories, and putrid wood, in various parts of the continent.

## GENUS CCII.—DYNASTES? *MacLeay*.

*Antennæ* with the basal joint stout, pilose; the second subglobose; the five following very short, transverse; the remainder forming an elongate-ovate triphyllous club. *Palpi* with the terminal joint ovate, acuminate: *mandibles* with the internal edge denticulated: *maxillæ* dentated: *mentum* subquadrate, convex, setose: *head* subquadrate: *clypeus* with the margin thickened: *thorax* rounded, margined, obtusely cornute in front: *body* oblong, convex: *anterior tibiæ* tridentate; *posterior* transversely ciliated.

The chief distinctions between this genus and *Oryctes* consist in the form of the terminal joint of the palpi, the denticulated mandibles and maxillæ, the convexity of the thorax, unarmed head, subquadrate mentum, &c.

‡Sp. 1. *inermis*. *Piceo-niger, thorace cornâ brevissimo obtuso, subtus ferrugineus pilosus*. (Long, corp.  $6\frac{1}{2}$  lin.)

*Sc. inermis.* *Martyn*, *pl.* 4. *f.* 35.—*Or.?* *inermis.* *Steph. Catal.* 115. *No.* 1185.

The entire body above pitchy-black, smooth: antennæ ferruginous: the anterior margin of the clypeus elevated, dentate: thorax very convex, with scattered impressions; the middle of the anterior margin with a short obtuse horn, behind which is an excavation: elytra rugose-striated, with impressed dots: abdomen beneath ferruginous, pilose: legs also ferruginous, dusky exteriorly.

Marsham describes this species as being in the collection of the late Mr. Beckwith (now incorporated into that of the Zoological Society); and a pair are in Mr. Kirby's cabinet, who has also specimens, I believe, from the south of Europe.

### FAMILY XXX.—MELOLONTHIDÆ, *MacLeay*.

*Antennæ* nine- or ten-jointed, the basal joint conic, elongate; the capitulum elongate, composed of from three to seven lamellæ. *Labrum* with the anterior margin exposed, sometimes thickened and deeply emarginate beneath: *mandibles* stout, corneous hidden, beneath the clypeus: *maxillæ* short, with a corneous process within: *palpi*, *maxillary* prominent, with the terminal joint ovate or oval, and a little thickened: *mentum* inflected: *head* subquadrate; *clypeus* divided by a transverse suture before the eyes: *thorax* subquadrate: *scutellum* distinct: *body* subconvex, ovate: *elytra* shorter than the *abdomen*: *legs* slender; *tibiæ* not dilated.

The stout mandibles and corneous dentate maxillæ of the insects comprised in this family are admirably calculated for their method of feeding; their food consisting in their perfect state of living vegetable matter, chiefly the leaves of trees, which they devour

† *Sp. 2. Juvencus.* *Piceus*, *thorace anticè impresso mucronato, clypeo subemarginato.*

*Geo. Juvencus.* *Fabricius.*—*Dy. Juvencus.* *Wilkins' Catal.!*—*Dy.?* *Juvencus.* *Steph. Catal.* 115. *No.* 1185. *note.*

Pitchy: clypeus rounded, with a transverse elevated striga in the middle: thorax rounded, punctate, black, anteriorly with a small impressed point, and beneath this a very short mucro; elytra crenate-striate: body pilose.

In the printed catalogue of the rare insects contained in Mr. Wilkins' cabinet, a reference is made to this insect, as here quoted, but I presume the species last described is intended, which were it not for its locality I should conceive synonymous.

most voraciously, as their larvæ do the roots; and the latter are sometimes very destructive, as they live for several years; but the imago lives for a short period only.

The following are the indigenous genera, which may be detected by the annexed characters:—

Antennæ articulis	10. Ungues	{simplices,	{æquales, ad basin subtus unidentati:	206. MELOLONTIA.	
					{inæquales:
		{bifidi. Palpi articulo ultimo	{subacuto:	203. SERICA.	
					{truncato:
	9. Ungues	{inæquales. Clypeus	{haud productus, transversus, integer. Thorax posticè	{angustatus:	
					{latus:
		{productus, reflexus:	209. ANISOPLIA.		
				{æquales, simplices:	205. AMPHIMALLA.

### GENUS CCIII.—SERICA, *MacLeay*.

*Antennæ* ten-jointed, the basal joint thick, clavate, pilose; the second globose; third and fourth subcylindric, short; fifth conic; sixth and seventh cup-shaped; the remainder forming a trilamellated club, which in the male is very long and narrow. *Palpi*, maxillary pilose, with the terminal joint naked, shorter than the others united, cylindric, with the apex rather acute; labial with the terminal joint very acute: labrum emarginate: head broad: clypeus slightly emarginate: eyes large, globose: thorax very short, transverse: body short, ovate, convex: elytra elongate: legs slender: tarsi very long; claws equal, bifid at the apex.

*Serica* resembles *Omaloptia* in habit; but from that genus the acuteness of the terminal joint of the maxillary palpi at once removes it, exclusively of the dissimilarity in the proportions of the antennæ, form of body, &c.

Sp. 1. brunnea. *Rufo-testacea, glabra, thorace puncto laterali fusco, elytris striatis.* (Long. corp.  $4\frac{1}{2}$ —5 lin.)

Sc. brunneus. *Linné.*—*Martyn, pl. 3. f. 24.*—*Se. brunnea. Steph. Catal. 115. No. 1186.*

Entirely of a testaceous-red, glabrous, sometimes with a slight æneous tinge: clypeus punctate; the vertex sometimes dusky: eyes black: thorax finely punctulated, with an obscure fuscous spot on each side: elytra obsoletely punctate-striated.

Abundant occasionally near London, frequenting the sandy districts of Hampstead, Woolwich, Richmond, &c. ; and its remains are very frequently to be observed in spiders' webs during the month of August. "Rare in Cambs.—I have seen very few specimens."—*Rev. L. Jenyns*. "Sandfield, Cumb."—*T. C. Heysham, Esq.* "Sea banks, Tynemouth; Newcastle, Keswick, &c. common: I have dug the pupa up in grassy places on the Magnesian limestone, about three or four inches beneath the surface."—*G. Wailes, Esq.* "On Sketty Burrows (near Swansea)."—*L. W. Dillwyn, Esq.*

#### GENUS CCIV.—OMALOPLIA, *Koppe*.

*Antennæ* ten-jointed; the basal joint somewhat robust, subclavate, slightly pilose; second subglobose; third and fourth a little elongate, slender; three following transverse, cup-shaped, slightly dentate within, the remainder forming a short triphyllous capitulum. *Palpi*, maxillary with the terminal joint subtruncate; labial obtuse: head suborbiculate; clypeus rounded, entire: thorax rounded at the sides, sublobate posteriorly: body pilose, short, convex: elytra rounded at the apex, as long as the abdomen: legs rather short: tarsi very slender, elongate: claws small, uniform, bifid.

From *Serica* this genus differs in having the palpi obtuse, and the terminal joint of the maxillary ones truncate; the body short and stout, the antennæ abbreviated, with the capitulum ovate, the legs but moderately elongated, &c.

Sp. 1. *Ruricola*. *Ater sericeus, elytris rufis aut testaceis, margine suturâque nigris, aut cyaneo rufoque versicoloribus.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

Me. *Ruricola*. *Fabricius*.—Sc. *Ruricola*. *Don*. xi. pl. 378.—Om. *Ruricola*. *Steph. Catal.* 115. No. 1187.

Black, with a satiny gloss: clypeus slightly punctate: thorax finely punctured, immaculate, and with the head sparingly clothed with black hairs: elytra testaceous-red, simply striated, with the interstices punctured, the suture and margin black: legs piceous, with rufescent tarsi.

Var.  $\beta$ . *Steph. Catal.* l. c.—With the disc of the elytra dusky rufous, glossed with changeable blue tinges.

The elytra are sometimes entirely of a blue black, and the width of the dark margin in the testaceous variety differs considerably: the legs and thorax are sometimes rufo-testaceous, the probable effect of immaturity.

The only locality I am acquainted with for this insect near London is a portion of the western margin of Darent-wood, between the lane leading from the village and Dartford: it has been

taken abundantly on Newmarket-heath and in Sussex. “Occasionally taken on the wing at Swaffham Bulbeck, about midsummer.”—*Rev. L. Jenyns*.

GENUS CCV.—AMPHIMALLA, *Latreille*.

*Antennæ* nine-jointed; the basal joint elongate, slender at its origin, pilose; the second subglobose; the two following considerably elongate cylindric; the fifth and sixth short, transverse, slightly dentate within; the remainder forming a triphyllous club, slender and elongated in the male. *Palpi*, *maxillary* with the terminal joint considerably dilated, acuminate to the apex; *labial* short, acute: *head* small; *clypeus* short, broad, reflexed, entire: *eyes* large, globose: *thorax* short, transverse: *scutellum* rounded: *elytra* elongate, not covering the apex of the *abdomen*; the latter obtuse: *legs* moderate: *tarsi* rather stout, the basal joint shortest: *claws* simple, with a denticulation at their base.

Amphimalla differs from Melolontha by having the capitulum of the antennæ triphyllous in both sexes, the antennæ nine-jointed, the body pilose, the clypeus more produced, the terminal joint of the palpi of different form, &c.

Sp. 1. solstitialis. *Griseo-testacea villosa, vertice pectore abdomineque nigro-fuscis, elytris lineis quatuor pallidioribus.* (Long. corp. 7—10 lin.)

Sc. solstitialis. *Linné*.—*Martyn*, pl. 2. f. 17.—*Xanth. solstitialis.* *Steph. Catal.* 115. No. 1188.

Pale-testaceous: clypeus anteriorly ferruginous; vertex dusky: eyes black: thorax dusky-testaceous, densely clothed with griseous hairs: elytra sparingly clothed with pale long hairs, elongate, convex, rather pale, with the suture and outer margin fuscous, the disc slightly punctate, with four obsolete elevated whitish lines: exposed segments of the abdomen dusky-testaceous, granulated, clothed with long erect hairs: breast densely pubescent: abdomen black-brown, with a depressed whitish pubescence: legs rufescent.

Extremely common about the solstice in several places within the metropolitan district, but I believe not very abundant beyond the midland counties of England. “Cambridgeshire.”—*Rev. L. Jenyns*.—“Ramparts, Tynemouth Castle, the only locality known to me in this part.”—*G. Wailes, Esq.* “On Sketty Burrows, (near Swansea), rare.”—*L. W. Dillwyn, Esq.*

† Sp. 2. Fallénii. *Fusco-picea villosa, clypeo, thoracis lateribus elytrisque rufotestaceis, pygidio punctulato testaceo.* (Long. corp.  $6\frac{1}{2}$  lin.)

Me. Fallénii. *Gyllenhal*, iv. 258.

Pitchy-brown, villose; clypeus rufo-testaceous, with its reflexed margin brown: vertex pitchy-black, thickly and deeply rugose-punctate, with a longitudinal impressed foveola in the middle anteriorly, and an obsolete transverse interrupted carina between the eyes, which are brown: thorax, with the lateral margin obsoletely crenulated and broadly rufo-testaceous, the disc thickly punctured, with a dorsal punctate furrow, densely clothed with pale slightly decumbent hairs: scutellum clothed with a dense flavescent down: elytra shining rufo-testaceous, a little pubescent, somewhat thickly punctate, and rugose towards the suture: exposed segments of the abdomen testaceous, punctulated, with short erect hairs: breast densely clothed with long pale down; abdomen with short ashy-white hairs: legs pale rufo-testaceous.

The only example I have seen of this species was taken many years since by Mr. Chant—in whose collection it is preserved—but he forgets the exact locality, which is probably Derbyshire or Yorkshire.

#### GENUS CCVI.—MELOLONTA *Auctorum*.

*Antennæ* ten-jointed; the basal joint elongate, clavate, pilose, robust; the second slender, also clavate, and shorter than the third, which is of similar form, the remainder, in the male, forming a bent elongate capitulum formed of seven leaves, and in the female a short six-leaved capitulum, the joint preceding which, or the fourth from the base, is short, transverse, with a denticulation within. *Palpi* with the last joint oval, rather thickened and slightly acuminate: *clypeus* entire, slightly reflexed: *thorax* convex, with the sides rounded; the angles acute: *scutellum* rounded: *body* stout, convex, squamose: *elytra* shorter than the abdomen, the apex within submucronate: *legs* slender; *tarsi* moderate; *claws* simple, with a tooth at the base.

The distinctly ten-jointed antennæ of *Melolontha* distinguish the genus from *Amphimalla* and *Phyllopertha*, exclusively of other characters, amongst which may be noticed the seven-leaved club of the male antennæ, and the six-leaved one of the female: the species devour leaves in the perfect state, and the roots of grass in that of the larva.

Sp. 1. *vulgaris*. *Oblonga, convexa, nigro-picea, pubescens, elytris testaceis, margine concolore, stylo ani sensim angustato*. (Long. corp. 10 lin.—1 unc. 2 lin.)

Sc. *Melolontha*. Linné.—Donovan, viii. pl. 264. f. 2.—Mc. *vulgaris*. Steph. Catal. 116. No. 1189.

Pitchy-black, densely pubescent: clypeus with the margins ferruginous, reflexed; thorax thickly punctured, with the sides rounded, the angles acute,

villose, especially towards the sides: scutellum black, with a row of yellowish scales at the base; elytra slightly rugose-punctate, villose, each with five rather elevated smooth longitudinal lines: abdomen considerably produced at the apex, and terminating in a gradually attenuated, subacuminated process: breast clothed with a griseous down; abdomen slightly pubescent, with triangular snowy patches on the sides: legs ferruginous.

The pubescence is very easily rubbed off, when the elytra appear of a brick colour.

An abundant insect throughout the south and west of England, in the beginning of May, the larvæ at times doing incredible mischief in pastures, &c. “Very common (near Swansea), and in 1814, every tree, bush, and hedge was covered and nearly denuded by them.”—*L. W. Dillwyn, Esq.* “Not very common, near Carlisle.”—*T. C. Heysham, Esq.* “Cockchafers are found very plentiful about Gravesend, and are collected in innumerable quantities by the Dutch fishermen.”—*Pococke’s Gravesend, p. 217.* “Newcastle, Mildon-park, Northumberland, Keswick, &c.”—*G. Wailes, Esq.*

Sp. 2. Fullo. *Oblonga, fusco-brunnea, albo irrovata, scutello maculâ duplici albâ.* (Long. corp. 1 unc. 2—6 lin.)

Sc. Fullo. *Linné?*—*Don. iv. pl. 112.*—*Me. Fullo. Steph. Catal. 116. No. 1190.*

Blackish, brown or testaceous: clypeus punctate, the sides densely covered with white scales: thorax also punctured with three longitudinal lines of white scales, the outer ones interrupted; scutellum with a bilobed scaly white patch; elytra a little rugose, irregularly varied with white scales, the suture elevated: breast clothed with a fulvous down: abdomen with short ashy-white or griseous pubescence; antennæ of the male with the capitulum composed of very long, curved, lamellæ; of the female, small, ovate.

Rare: all the known indigenous specimens have been captured on the sandy coasts of Kent between Hythe and Ramsgate, chiefly in the neighbourhood of Deal and Sandwich: in the beginning of July, 1815, eight examples—of which I possess two—were taken by a lady near the latter place.

#### GENUS CCVII.—PHYLLOPERTHA, *Kirby.*

*Antennæ* nine-jointed, the basal joint elongate, clavate; the second globose; the three following slender, gradually diminishing in length; the sixth transverse, very short; the remainder forming a triphyllous club, slightly elongated in the male. *Palpi* subfiliform; *maxillary* with the terminal joint

subtruncate: *clypeus* transverse, the anterior margin reflexed; entire: *thorax* convex, with the sides dilated anteriorly, and the hinder margin subcarinated: *scutellum* short, rounded: *elytra* a little depressed; rather shorter than the *abdomen*; *body* ovate, pilose: the four *anterior claws* very unequal, one being slender and simple, the other bifid; the posterior ones simple, somewhat unequal, the inner one being rather the least.

The bifid unequal claws at once distinguish this genus from *Melolontha*, exclusively of other characters, derived from the nine-jointed antennæ, subfiliform palpi, &c.; and from *Anomala*, the form of the thorax, which is narrow behind, and the pubescent body, will enable any one to divide it.

Sp. 1. *Horticola*. *Ovata, hirta, cæruleo-virescens, elytris striatis, testaceis, aut nigris, aut nigro-brunneis.* (Long. corp. 3—5 lin.)

Sc. *Horticola*. *Linné*.—*Martyn*, *pl.* 4. f. 43.—*An. Horticola*. *Steph. Catal.* 116. No. 1191.

Green or blue, clothed with long hairs: *clypeus* thickly punctured: *thorax* convex, punctate: *elytra* slightly convex, coarsely punctate-striated, deep, slightly glossy, rufo-testaceous or ferruginous, with the lateral margin dusky: *body* and legs greenish-black.

Var.  $\beta$ . *Steph. Catal. l. c.*—With the *elytra* of a bluish-black.

Very variable in the colour of the *elytra*; sometimes the base alone is bluish-black, at others the suture: again some examples have the disc alone slightly testaceous, and the rest of the surface bluish-black, or brown: every intermediate shade may be obtained: the dark varieties are however rare.

Common in June and July, throughout the metropolitan district, frequenting hedges and wood sides. “Common in Cambs., and occasionally in great profusion.”—*Rev. L. Jenyns*. “York, &c.”—*W. C. Hewitson, Esq.* “Newcastle and Keswick, very abundant.”—*G. Wailes, Esq.* “Extremely common, particularly on roses (near Swansea).”—*L. W. Dillwyn, Esq.* “Common near Carlisle; and at times it appears in immense numbers.”—*T. C. Heysham, Esq.*

Sp. 2. *errans*. *Testacea, thorace maculis duabus nigris, aut immaculato; pedibus rufo-testaceis.* (Long. corp. 4 lin.)

Sc. *errans*. *Fabricius*.—*An. errans*. *Steph. Catal.* 116. No. 1192.

Pale-testaceous, slightly pubescent: eyes dusky: head and thorax thickly punctate, the latter with an obscure dusky spot on each side towards the margin: *elytra* obscurely punctate-striate, the striae disposed in pairs, and the interstices faintly punctured: legs pale testaceous, with the denticulations of the tibiae and the tarsi somewhat piccous.



This insect differs considerably in form from the preceding species, and I doubt the propriety of associating it in the same genus, but my specimen is in too injured a condition to determine the point satisfactorily.

I possess a single example of this insect, which was captured above twenty years since in the neighbourhood of Dartford. Fabricius gives it as a native of England, and refers to the late Mr. Tunstall's collection as containing a specimen.

### GENUS CCVIII.—ANOMALA, *Koppe*.

*Antennæ* nine-jointed; the basal joint stout, clavate, obliquely truncate, pilose; the second short, subglobose; the two following slender, elongate; the two next short, transverse; the remainder forming a short, triphyllous club. *Palpi* subfiliform, glabrous: *head* suborbiculate: *clypeus* truncate anteriorly, entire, the margins but little reflected: *thorax* transverse, undulated at the base, which is as broad as that of the *elytra*, which are broad; *scutellum* rounded: *body* ovate, convex, glabrous: *legs* slightly pilose: *anterior tibiæ* simple, produced at the apex, with a spiniform process; four *anterior tarsi* with the *claws* unequal; one stout and bifid at the apex; *posterior* unequal, undivided.

Anomala differs externally from Anisoplia by having the clypeus but slightly produced and transverse, the basal joint of the antennæ distinctly truncate at the apex; the palpi subfiliform; the thorax transverse, with its base as broad as that of the elytra, which are convex.

Sp. 1. Frischii. *Viridi- aut cæruleo-æneus, elytris obsoletè punctato-striatis, testaceis, suturâ virescenti, aut totò æneo-viridibus aut cærulescentibus.* (Long. corp. 5—7 lin.)

Me. Frischii. Fabricius.—Sc. Frischii. *Don. xi. pl. 390. f. 2.—An. Frischii. Steph. Catal. 116. No. 1193.*

Oblong-ovate, head, thorax, and scutellum punctured, green or blue-bronze, rather glossy; the lateral margins of the thorax more or less broadly testaceous: elytra rather obsoletely punctate-striate, the interstices irregularly punctured, and slightly raised towards the outer margin, in general of a greenish-testaceous, with the suture of a darker hue, but sometimes entirely of a bright rich green or deep black or violet-blue: body beneath and legs of a greenish brass: antennæ testaceous, with the capitulum fuscous.

The lateral margins of the thorax are sometimes concolorous with the disc, without reference to the colour of the elytra:—such varieties have been distinguished as different species, but evidently with impropriety.

Very abundant on several of the coasts of Britain, but rare inland. I possess a fine specimen with green elytra, from the banks of the Thames, near Richmond, and I found an elytron in fine condition in a sand-pit on Ockham-heath, near Ripley, in July, 1827. "Sandylinks, near South Shields, abundant."—*G. Wailes, Esq.* "Frequent in June and July on the sand-hills (near Swansea)." —*L. W. Dillwyn, Esq.* "Aldborough, copiously."—*Rev. F. W. Hope.*

† Sp. 2. Donovan. *Nigro-æneus, elytris punctato-striatis testaceis, suturâ limbo apice fuscâque undulatâ nigris.* (Long. corp. 5 lin.)

Sc. Donovan. *Marsham.*—An. Donovan. *Steph. Catal.* 117. No. 1196.

Black-brass, slightly shining; head and thorax immaculate: elytra punctate-striate, testaceous, with a central transverse slightly undulated fascia, the suture, apex, and lateral margins bronzed-black: body beneath piceous, with a cinereous pubescence: legs piceous: antennæ ferruginous.

This insect evidently belongs to the present genus, as pointed out to me by Mr. Westwood, and differs chiefly from *Ano. Frischii* by having the elytra rather deeply punctate-striated, with their margins and a transverse fascia black.

A pair of this species in Mr. Donovan's collection, and two in that of the British Museum, are the only examples that have hitherto come beneath my observation: the former were captured "on the sand-hills near Newton Nottage."—*Donovan's Tour through Wales*:—of the locality of the others I am ignorant.

Sp. S. Vitis. *Sericeo-viridis, thoracis lateribus flavo-testaceis, antennis testaceis.* (Long. corp. 6—7 lin.)

Sc. Vitis. *Villers.*—*Martyn, pl.* 1. f. 8.—An. Vitis. *Steph. Catal.* 117. No. 1194.

Short, ovate; entirely of a rich changeable satiny green, with the lateral margins of the thorax more or less broadly testaceous-yellow, and sometimes the outer margins of the elytra, the posterior coxæ and anterior edge of the hinder femora the same; as are the antennæ with a concolorous club; head and thorax punctate: elytra broad, rather coarsely punctate, and irregularly striated.

Known from the green variety of *An. Frischii* by its brevity and width, and by the concolorous club of the antennæ.

I have three specimens of this species, which are said to have been captured in the neighbourhood of London\*.

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\* From the rarity of this insect in Britain, and from the circumstance of its name implying that the vine alone forms its pabulum, its indigenous origin





GENUS CCIX.—ANISOPLIA, *Koppe*.

*Antennæ* nine-jointed, with the basal joint robust, abruptly clavate, pilose; the second short, subglobose: the two following elongate, cylindric; the next shorter, subtransverse; the sixth veryshort, transverse; the remainder forming a triphyllous, elongate, slender club. *Palpi* with the terminal joint distinctly longer than the others, glabrous: *head* small, suborbicular; *clypeus* considerably produced, narrowed towards the apex, which is much reflexed and rounded: *thorax* subtransverse, its lateral margins subsinuated, its base slightly produced in the middle, and not so broad as that of the *elytra*, which are depressed: four anterior *tarsi* with the *claws* very unequal, one being very slender and short, undivided, the other much stouter, bifid; *posterior* slightly unequal, undivided.

The nasiform clypeus of this genus at once serves as an external indication of its distinction from *Anomala*, from which it also differs by having the terminal joint of the palpi distinctly larger than the others, the thorax subtransverse, its base not being so wide as that of the *elytra*, which are depressed.

Sp. 1. Agricola. PLATE XIX. f. 1.—*Nigro-cæneus, thorace villosa, elytris lividis, limbo fasciâque arcuatâ nigris.* (Long. corp. 7 lin.)

Sc. Agricola. Linné?—Don. xi. pl. 390. f. 1.—An. Agricola. Steph. Catal. 117. No. 1195.

Deep brassy-black; head and thorax slightly villose, punctate; the latter depressed on the hinder margin near the angles, and with a small round fovea near the lateral ones: *elytra* glabrous, livid, with the suture, margins, a subquadrate common spot surrounding the scutellum, and an abbreviated transverse fascia a little behind the middle, black: body beneath clothed with short, cinereous, down: legs and antennæ black.

A rare insect in Britain: all the known examples have been found, I believe, on the coasts of South Wales. "Taken on the coast of Caermarthenshire."—*Donovan, l. c.*

has been questioned: but as Fabricius states that it feeds also upon the rose, that objection becomes untenable, and the mere fact of being rare is no criterion to judge from, as amongst many other similar examples may be instanced the rediscovery of *Chrysomela cerealis* in comparative plenty upon the Welsh mountains in July last, by W. D. Fox, Esq.; an insect supposed to feed upon the cork tree, being frequently taken in cork-cutters' shops in London, and consequently expunged from the British list on account of that fact, combined with its scarcity; though Fabricius says that it is found upon broom.

GENUS CCX.—HOPLIA, *Illiger*

*Antennæ* ten-jointed; the basal joint very slender at the base and abruptly clavate; the second short, globose; the third elongate, slightly obconic; the two following of equal length, short, transverse; the sixth and seventh very short, the remainder forming an ovate triphyllous club. *Palpi*, maxillary with the terminal joint incrassate, conic-ovate: *head* small, rounded: *clypeus* with the anterior margin slightly emarginate: *thorax* slightly produced in the middle behind: *elytra* shorter than the abdomen: *body* ovate, depressed, scaly: four anterior *tarsi* with very unequal *claws*, the largest bifid; posterior with a single, stout, undivided claw.

*Hoplia* is the only indigenous genus that has the antennæ ten-jointed, and the claws at the same time unequal and simple; it differs also from the two preceding, by having the body round, with minute scales, as in *Melolontha*, and the elytra shorter than the abdomen.

Sp. 1. *argentea*. *Fusco-nigra, subtus argenteo nitens, elytris castaneis, pedibus nigris*, mas; *aut pedibus rufis*, femina. (Long. corp. 4—4½ lin.)

Mel. *argentea*. *Olivier*.—Sc. *argentea*. *Martyn*, pl. 2. f. 11.—Ho. *argentea*. *Steph. Catal.* 117. No. 1197.

Slightly squamose; head, thorax, and scutellum obscure fuscous black, a little pilose: elytra dull rufo-testaceous or castaneous: body beneath and legs black, clothed with shining silvery or bluish scales. Female with the base of the antennæ, palpi, elytra, and legs rufous.

Rather variable in size and in colour; some examples being of a darker and others of a lighter hue than the above: and the abdomen of the female is frequently piceous.

Not uncommon in some districts in the neighbourhood of London; in July, 1813, I observed an amazing number flying in a field, on Muswell-hill, about noon, and have occasionally taken the insect in other places within the metropolitan district: it also occurs in Somersetshire, and in Devonshire, Cornwall, and Suffolk. “Near Swansea, plentiful in 1814.”—*L. W. Dillwyn, Esq.* “About Ely, and in the Devil’s-ditch, plentiful.”—*Rev. L. Jenyns*. “Epping.”—*Mr. Doubleday*.

FAMILY XXXI.—CETONIADÆ, *MacLeay*.

*Antennæ* ten-jointed, glabrous: the basal joint large, stout, deflexed, tuberculi-form; the capitulum triphyllous, ovate. *Labrum* membranaceous, concealed

beneath the clypeus: *mandibles* compressed, slender, lanceolate, with a subquadrate membrane within: *maxillæ* with membranaceous process within, ciliated: *palpi*, *maxillary* with the terminal joint much larger than the others. *Head* quadrate: *eyes* prominent: *thorax* ovate-quadrate, or suborbicular; *sternum* sometimes produced anteriorly: *elytra* shorter than the abdomen: *body* ovate, greatly depressed; *scutellum* mostly distinct: *legs* slender; *tarsi* with simple, acute, undivided *claws*.

The Cetoniadæ are generally of gay and lively colours, and in their perfect state subsist on vegetable juices, some preferring the sap which flows from the wounds of trees, while others extract the nectar of flowers: the former insects in their larva state usually devouring putrescent wood, while the latter attack the roots of living plants. The antennæ, concealed labrum, and membranaceous maxillæ, readily distinguish them from the Melolonthidæ.

The following are the more obvious external characters of the indigenous genera:

Sternum anticæ	{	haud productum:	{	duabus externis:	211. TRICHIUS.
		Tibiæ anticæ dentibus			
	{	productum:	{	quinque externis:	212. ACANTHIURUS.
					213. CETONIA

## GENUS CCXI.—TRICHIUS, *Fabricius*.

*Antennæ* shorter than the head; basal joint curved, slightly pilose, with a few bristles; the capitulum elongate, slender. *Palpi*, *maxillary* subfiliform, the basal joint minute; second and third short obovate, terminal elongate-obtuse: *labial* with the apical joint larger than the rest, ovate: *head* porrect: *clypeus* quadrate, the anterior margin reflexed and somewhat emarginate: *thorax* suborbicular: *scutellum* short: *elytra* subquadrate: *body* robust: *abdomen* emarginate at the apex: *legs* elongate: *tibiæ* bidentate externally: *tarsi* with simple, acute, *claws*.

The genus *Trichius*, although it contains three indigenous species only, nevertheless requires subdivision, and will probably ere long be formed into two genera, the habit of the insects being so extremely dissimilar, the typical species having the body nearly entirely clothed with dense pubescence—whence the name of the genus—and the others being nearly glabrous, or but slightly pubes-

cent: they may be distinguished from the *Cetoniæ* by wanting the appendages at the outer edge of the base of the elytra, so conspicuous in those insects; and from the *Acanthuri* by the anterior tibiæ being distinctly bidentate only, as well as by the form of the terminal joint of the palpi.

A. With the body more or less tomentose.

Sp. 1. *fasciatus*. *Niger, flavo-rufo tomentosus, elytris atris fasciis duabus luteis internè confluentibus*. (Long. corp. 7—8 lin.)

Sc. *fasciatus*. *Linné*.—*Don*. iv. pl. 140.—*Tr. fasciatus*. *Steph. Catal.* 117. No. 1198.

Black: head and thorax densely clothed with erect fulvous hairs: elytra nearly glabrous, of a deep satiny black, with two transverse yellow fasciæ united by a longitudinal one from the base to the apex, leaving the suture itself black; or yellow, with a rounded spot at the base and apex, an abbreviated transverse fascia, and the margin black: abdomen densely pubescent above, pilose beneath.

Var.  $\beta$ . *Tr. succinctus*. *Fabricius*.—*Steph. Catal.* l. c.—With the elytra black at the base and apex, the centre yellow, with an abbreviated transverse fascia not touching the suture.

The fasciæ on the elytra vary considerably in form. Var.  $\beta$ , of which I possess specimens taken by my friend Mr. Dillwyn, is clearly only a variety.

This rare and elegant insect has not hitherto occurred, I believe, within the metropolitan district, although greatly distributed over the western portion of the island from south to north. “Aberdeen by Mr. Townsend, and near Exeter by Mr. Harris.”—*Dr. Leach*. “Loch Rannoch.”—*J. C. Dale, Esq.* “About forty of these beautiful insects have been taken in the neighbourhood (of Swansea), and I have generally seen them in pairs, mostly on umbelliferous plants. It has also been taken at Coytrahene and St. Hilary.”—*L. W. Dillwyn, Esq.*

B. With the body glabrous, shining.

Sp. 2. *variabilis*. *Niger, subnitidus, rugoso-punctatus, elytris albo-punctatis*. (Long. corp. 9—10 lin.)

Sc. *variabilis*. *Linné*.—*Tr. variabilis*. *Steph. Catal.* 118. No. 1200.—*Curtis*, vi. pl. 286.

Black, slightly shining: clypeus and thorax thickly punctured, the latter with the punctures rather coarse and deep, with a shallow dorsal channel, and fre-



frequently with a white dot on the hinder angle; elytra rugosely punctured, each with five ochreous spots, placed very obliquely in pairs, and forming on both elytra a cross; breast pilose; abdomen nearly glabrous; in the male with a small yellowish spot on the side of each segment, and a larger one on the last; this sex has also the intermediate tibiæ curved at the base; and the female has the apex of the abdomen bituberculated.

Usually found in decayed oak trees; rare near London; two specimens having been taken on Penge Common, in 1806, and two others in a lane near Brixton, about ten years subsequently. It is, however, found annually in some plenty near Windsor, by Messrs. Griesbach, to whom I am indebted for part of my series.

Sp. 3. nobilis. *Viridi- aut cupreo-aureus, subtus cupreus, thorace sulcato, elytris abdomineque albo maculatis.* (Long. corp. 8—10 lin.)

Sc. nobilis. *Linné.*—*Don.* v. pl. 154. f. 1, 2, 3.—*Tr. nobilis.* *Steph. Catal.* 118. No. 1201.

Shining-green, or coppery-gold colour; clypeus broad, punctate: thorax thickly rugose-punctate, with an obsolete dorsal furrow, and a white spot at the hinder angle on each side; elytra transversely rugose, with scattered white spots; abdomen cupreous, with white spots on the margin and on the upper exposed surface; breast clothed with reddish hairs. Male with curved intermediate tibiæ.

In some examples the white spots on the elytra are evanescent.

Somewhat local, but found in several places within the metropolitan district; usually upon umbelliferous flowers: I have taken it at Darent, Birch, and Coombe-woods. “Greenhithe-wood.”—*W. Raddon, Esq.* “Near the canal reservoir, Carlisle.”—*T. C. Heysham, Esq.*

This and the foregoing, with some continental species, form the genus *Gnorimus*, St. Fargeau.

## GENUS CCXII.—VALGUS, *Scriba* \*.

*Antennæ* as long as the head, the basal joint considerably elongate, slender at the base, slightly pilose, the capitulum ovate. *Palpi*, with the terminal

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\* *Acanthurus* of Kirby, employed in page 229, I find was long since applied to a genus of fishes by La Cèpede; it therefore becomes necessary to adopt another term, and as the insect which forms the type of the genus has been designated by the name above given in the last volume of the *Encyclopédie Methodique*, I have here continued it, in order to avoid the inevitable confusion arising from the use of the same name in different classes of nature.

joint stouter than the others, short, ovate: *head* deflexed: *clypeus* subemarginated: *thorax* subquadrate; with the margins denticulate, and two longitudinal wrinkles: *scutellum* elongate, triangular: *elytra* short, abruptly depressed on the sides: *abdomen* with a series of spiniform scales at the apex, and in the female with an acute ovipositor: anterior *tibiæ* with five teeth on the outer edge; hinder *tarsi* with the basal joint elongate; *claws* simple.

The smaller bulk of the only indigenous species, compared with the *Trichii*, at once points out a dissimilarity therefrom; but the difference in the form of the terminal joint of the palpi, the deflexed head, subquadrate, longitudinally porcate, and denticulated thorax, and five-toothed anterior *tibiæ*, with the spiniform process at the apex of the abdomen, may also be noticed.

‡ Sp. 1. hemipterus. *Niger, nigro et albido-squamosus, suprâ albido maculatus, subtus albidus; versûs anum maculis duabus nigris.* (Long. corp. 3—4 lin.)  
Sc. hemipterus. *Linné.*—Tr. hemipterus. *Steph. Catal.* 118. No. 1202.

Black, varied with black and white scales, somewhat rugose-punctate: *thorax* slightly narrowed in front, the disc unequal, with two longitudinal wrinkles, and spotted with white; *elytra* also with white spots, each with four somewhat obsolete, waved, striæ: the body beneath and anus clothed with whitish or cinereous scales, with two black spots near the latter; legs black.

This insect has recently been captured in the west of England; and two specimens in the late Mr. Francillon's cabinet are said to have been taken in a chalk-pit in Kent. "I have received this species from Bath alive, also from Devonshire."—*G. Wailes, Esq.*

### GENUS CCXIII.—CETONIA, *Fabricius.*

*Antennæ* short; the basal joint robust, glabrous, the capitulum elongate, triphyllous; the first joint thereof dilated in the centre. *Palpi* short, with the terminal joint elongate, ovate-cylindric: *mandibles* short: *head* moderate: *clypeus* quadrate, emarginate: *thorax* subtrigonal, truncate anteriorly: *elytra* abruptly sinuated towards the base, externally, with a triangular scale interposed between the outer base and the posterior angles of the thorax: *sternum* produced anteriorly; *scutellum* large, elongate: *body* short, ovate, depressed, broad.

The anteriorly produced sternum, large scutellum, externally sinuated *elytra*, and above all the singular interposed triangular process between the base of the *elytra* and that of the thorax, at once show the distinction between *Cetonia* and the other indigenous

genera of this family. The insects are usually found in flowers in their perfect state, and in that of a larva they devour roots.

The genus may be divided, as there is considerable diversity in the habit of the two species, which seem to belong to different genera.

A. With the body glabrous, and all the tarsi shorter than the tibiæ.

Sp. 1. *aurata*. *Viridi-aurea, nitidissima, elytris albo-strigosis, sterno convexo apice subgloboso*. (Long. corp. 9—11 lin.)

Sc. *auratus*. *Linné.—Martyn, pl. 3. f. 27.—Ce. aurata. Steph. Catal. 118. No. 1203.*

Above rich shining golden-green, beneath bright cupreous: clypeus thickly punctured, with an elevated longitudinal line: thorax punctate, slightly convex, immaculate: scutellum very smooth, with a few impressions at the base: elytra irregularly and rather thickly impressed with dots and lunular marks, with a broad furrow posteriorly towards the suture, and vanishing anteriorly, the suture itself being elevated; and on the posterior half various scattered transverse undulated whitish marks: sternum smooth, with the produced apex subglobose.

Slightly variable in colour, and in size and markings.

One of the most abundant of our coleopterous insects, frequenting the flowers of the rose, &c., in gardens throughout the south of England. “Common in Cambs.”—*Rev. L. Jenyns*. “Common about Swansea.”—*L. W. Dillwyn, Esq.*

B. Body pilose; the posterior tarsi longer than the tibiæ.

‡ Sp. 2. *stictica*. *Nigro-ænea, undique albo-guttata, clypeo elongato, lineolâ frontis elevatâ*. (Long. corp. 5—6 lin.)

Sc. *sticticus*. *Linné.—Ce. stictica. Steph. Catal. 118. No. 1204.—Sc. Greenii. Don. xii. pl. 418?*

Brassy or coppery-black, clothed with scattered whitish hairs: clypeus elongated, with an elevated longitudinal ridge: thorax also with a longitudinal carina, thickly punctate, with six parallel white spots in pairs on the back, and other scattered ones towards the edges: elytra irregularly punctate-striate, and with about twenty unequal white spots on each: breast densely pilose: abdomen with a series of four white spots in the middle, and four smaller ones on each side.

Several specimens of this insect were taken three or four years since near Windsor, by Mr. J. R. Griesbach: a pair were in the collection of the late Mr. Francillon, and one or more in that of Mr. Green, if the *Sc. Greenii* of Donovan be synonymous.

## SUBSECTION III.

Corresponds with the Sternoxi of Latreille, and is nearly thus characterized by him:—*Antennæ* eleven-jointed, filiform, rarely thickened exteriorly, pectinated, serrated, or with the articulations towards the apex produced above into denticulations: *sternum* mucronated, the apex of the mucro received into a cavity in the middle: *body* often elliptic, conic, or trigonate: *thorax* with the posterior angles produced into an acute spiniform process: *head* short, deeply inserted in the thorax: *elytra* broad, elongate: *legs* short, capable of being closely applied to the body.

The insects of this most natural section subsist in their perfect state upon vegetable substances, some destroying the ligneous particles of trees, and others living upon the leaves or juices thereof. The two families contained therein may be thus concisely distinguished:

<i>Mandibulæ</i>	{ integræ: . . . . .	32. BUPRESTIDÆ.
	{ unidentatæ aut subemarginatæ: . . . . .	33. ELATERIDÆ

FAMILY XXXII.—BUPRESTIDÆ, *Leach*.

*Antennæ* eleven-jointed, rather slender, short, filiform or setaceous, more or less serrated or pectinated. *Palpi* generally filiform, nearly concealed: *head* retuse, sometimes deeply emarginated: *thorax* short, broad, occasionally lobate behind; the posterior angles rarely produced behind: *body* generally oval, convex, or depressed, more or less triangular or conic, sometimes cylindric, linear-elongate, attenuated towards the apex: *legs* short, the four basal joints of the *tarsi* broad, the fourth frequently bilobed: *claws* simple. Females with a trilamellated ovipositor.

Like the Cetonidæ, the insects of this family are of brilliant and lively hues, and amongst the exotic species are some of the most splendid known insects; but few of the indigenous ones are remarkable for the beauty of their colours: their larvæ reside in and subsist upon wood: the imago is found generally in hot and dry weather, and flies with great facility and with rapidity, but walks with difficulty: the smaller species are found in flowers, or upon leaves, but the larger ones are generally found in the trunks of trees, or in houses, timber-yards, &c.

The indigenous species may be divided by the following external characters into genera.

<i>Palpi</i>	{	<i>filiformes.</i> <i>Antennæ</i>	{	<i>filiformes.</i> <i>Scutellum</i>	{	<i>distinctum : Corpus</i>	{	subovato-triangularē,	aut conicum : 214. BUPRESTIS.				
								obsoletum : . . . . .		cylindricum, line- ari-elongatum : 215. AGRILUS.			
											clavatæ : . . . . .	217. TRACHYS.	
													216. APHANISTICUS.

GENUS CCXIV.—BUPRESTIS *Auctorum*.

*Antennæ* subfiliform, serrated in both sexes, basal joint elongate, subclavate, terminal one minute. *Palpi*, maxillary subfiliform, the terminal joint slightly tumid; labial minute: labrum attenuated and slightly emarginated in front: mandibles slightly bifid at the apex: maxillæ small, somewhat bilobed at the tip: head deflexed, short, retuse: thorax with the posterior margin closely applied to the base of the elytra; the latter elongated, trigonate, entire, or serrated: legs slender; tarsi with the penultimate joint bilobed.

The genus *Buprestis* may be known from *Agrilus* by the greater width of the body, the thickening of the terminal joint of the maxillary palpi, the attenuated labrum, the elongate basal joint of the antennæ, bifid mandibles, &c.

Whether all the following species are truly indigenous remains questionable; but doubtless some are aboriginal natives, and as all those which are hereafter given as British are introduced from the inspection of specimens captured at large—and, as the insects are, moreover, found in similar latitudes on the continent—no material injury to science can arise should their native origin prove ultimately to be erroneous.

A. With the elytra dentate, or serrate, at the apex.

a. *With the outer tip of the elytra serrate.*

Sp. 2. *rutilans*. *Aurco-viridis, elytris striatis, viridibus nigro maculatis, margine aureo.* (Long. corp.  $7\frac{1}{5}$  in.)

‡Sp. 1. *chrysostigma*. *Purpurascenti-ænea*, thorace inæquali rugoso, elytris obscuris elevato-costatis, margine maculisque duabus disci rubro-aureis impressis. (Long, corp.  $6\frac{1}{5}$  lin.)

Bu. rutilans. *Fabricius*.—*Steph. Catal.* 119. No. 1206.

Brilliant blue- or golden-green; elytra of a fine metallic green, with the margins rich gold, and the disc sprinkled with violaceous-black spots.

A single example taken in June, 1817, near Matlock, in Derbyshire; and another “found near Westerham, in Kent, by Mr. Plasteed.”—*Marshall MSS.*

b. With the apex of the elytra two- or three-toothed.

†Sp. 3. *ænea*. *Fusco-ænea, subtus cuprea, capite thoraceque rugoso-variolosis, elytris striatis rugosis, apice attenuatis.* (Long. corp. 9 lin.)

Bu. *ænea*. *Linné*.—*Steph. Catal.* 119. No. 1207.

Brassy-brown above; rich copper colour beneath; with the head and thorax ruggedly shagreened; the elytra striated, with the apex attenuated and bidentate; legs dusky cupreous, punctate.

I have seen but one indigenous example of this fine species, which was taken “near Ebberley-house, Devonshire.”—*H. Hole, Esq.*

Sp. 4. *rustica*. *Ænea-nitida, thoracè antèriùs angustato, elytris striatis, apice truncatis, bidentatis.* (Long. corp. 8 lin.)

Bu. *rustica*. *Linné?*—*Steph. Catal.* 119. No. 1208.

Brilliant *æneous*, slightly tinted with green or bluish: head and thorax punctate, the latter narrowed anteriorly: elytra rather deeply striated *æneous*, or of a bronzed green: legs bronzed.

Three or four specimens only of this rare species have hitherto been captured in England. “At the entrance of a chapel, Old Brompton.”—*Mr. G. Waterhouse.*

‡Sp. 5. *tarda*. *Ovata, subdepressa, cæruleo-virescens, creberrimè punctulata, elytris cyaneis, apice rotundatis, clypeo flavescente.* (Long. corp. 6 lin.)

Bu. *tarda*. *Herbst. Col. xi. pl. 147. f. 3.*

Ovate, subdepressed, above bluish metallic green, thickly punctured, beneath dusky bronze: elytra blue, with the apex rounded: the clypeus yellowish: legs green or bluish.

Bu. *chrysostigma*. *Linné*.—*Berkenhout (!)*—*Steph. Catal.* 119. No. 1205.

Above bronzed-purple; beneath brilliant copper-colour: thorax rugose: elytra obscure, with three elevated longitudinal lines, with the margins and two impressed spots on the disc of each golden-red.

*Berkenhout* gives this fine species as indigenous; but I have never seen a British specimen.

A specimen is in the collection of Mr. J. H. Griesbach, I believe taken in the vicinity of Windsor.

Sp. 6. *flavomaculata*. *Obscurè nigro-ænea, fronte flavomaculata, elytris striatis maculis quatuor flavis, abdomine subtus fulvo maculatis.* (Long. corp. 8 lin.)

Bu. *flavomaculata*. *Fabricius*.—*Steph. Catal.* 119. No. 1209.

Dull black-bronze above, with the head punctate, spotted with yellow in front; the antennæ black: thorax thickly and deeply punctate, with a slender reddish-yellow streak within the margin on both sides: elytra striated, each with four yellow spots, of variable form: body beneath slightly pubescent, with each segment of the abdomen having a triangular fulvous-yellow spot on each side, some smaller ones in the middle, and some lines and spots of similar hue on the breast and pleuræ: legs black-brass.

Two examples (one of which I possess) taken about forty years since on a Lombardy poplar in St. George's Fields.

B. With the elytra entire, unarmed.

a. *With the body somewhat convex.*

† Sp. 8. *splendens*. *Oblongo-ovata, viridi-aurea, elytris lineis subquinis elevatis disco cæruleo-viridibus, suturâ margineque cupreo-aureis.* (Long. corp. 8 lin.)

Bu. *splendens*. *Fabricius*.—*Marsham in Linnæan Transactions*, x. 399. pl. xxxii. f. 1, 2.—*Steph. Catal.* 119. No. 1212, note.

Oblong-ovate, golden green; head rugose, cupreous; thorax trilobed behind, punctate, with a smooth golden-red medial line: elytra with the disc bluish-green, with the suture and margin golden-cupreous; each with five elevated lines, the one nearest the suture, and the two outer ones considerably abbreviated.

I have seen but one example, which was taken “in the Wandsworth road.”—*W. Plimpton, Esq.*

In the Linnæan Transactions, quoted above, Marsham relates that a specimen of this beautiful species was taken out of the top

‡ Sp. 7. *octoguttata*. *Nigro-cærulea nitida, thorace lineâ laterali, elytris maculis quinque abdomine plurimis quadrifariis flavo-albidis.* (Long. corp. 6 lin.)

Bu. *octoguttata*. *Linné*.—*Turton (!)*—*Steph. Catal.* 119. No. 1210, note.

Shining blue-black: head punctate, with some yellow dots on the forehead; thorax with a yellow lateral line, elytra striated, with five yellow spots on each; the abdomen with four rows of yellowish spots, and the breast and pleuræ with spots and lines of the same.

Said by Turton to inhabit Britain; but I presume without sufficient authority.

of a desk in Guildhall, which had been nearly thirty years in the office; and upon the surface being planed away the track of the larva was exposed.

b. *With the body depressed.*

Sp. 9. *Salicis. Viridis nitens, coleoptris aureis basi viridibus.* (Long. corp. 3 lin.)

Bu. *Salicis. Fabricius.—Don. iv. pl. 127.—Steph. Catal. 119. No. 1212.*

Brilliant-green, beneath immaculate; elytra of a rich gold or cupreous hue, with the base bright green.

This beautiful insect has been taken on some willows in Lordship-lane, near Dulwich.

‡ Sp. 10. *nitidula. Ovata viridi-aurea, subnitida, creberrimè rugoso-punctata, thorace foveis duabus transversis impressis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Bu. *nitidula. Linné.—Curtis, i. pl. 31.—Steph. Catal. 119. No. 1213.*

Ovate golden-green, slightly shining; head and thorax thickly rugose-punctate, the wrinkles on the latter being placed transversely; thorax with a transverse double impression a little behind the middle; elytra rather broader than the thorax at the base, depressed above, and obsoletely rugose-punctate; body brilliant golden-green beneath; legs green-brass; antennæ the same, obtusely serrated.

Above sometimes bluish or reddish.

Taken in the New Forest, near Brockenhurst, in the beginning of June, in the flowers of the white thorn.

‡ Sp. 11. *manca. Rufo-cuprea elytris obscuris, thorace aureo striis duabus nigris.* (Long. corp. 4 lin.)

Bu. *manca. Fabricius.—Turton (!)—Steph. Catal. 120. No. 1214, note.*

Rufo-cupreous, thorax with two obscure longitudinal lines; elytra obscure, thickly granulated; body beneath brilliant rufous-copper; femora cupreous; tibiæ, tarsi, and antennæ obscure.

Turton marks this as a British species; but I have not yet seen an indigenous specimen.

† Sp. 12. *quadripunctata. Ovata, nigra obscura, thorace foveolis quatuor transversim impressis, elytris vagè rugoso-punctatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

Bu. *quadripunctata. Linné.—Turton, (!)—Steph. Catal. 120. No. 1215, note.*

Ovate, dull-black, bronzed; thorax with four transverse impressed foveæ; the elytra thickly rugose-punctate.

Also marked as a native of Britain by Turton, but I suspect without sufficient authority.



GENUS CCXV.—AGRILUS, *Megerle*.

*Antennæ* serrated in both sexes; the basal joint short, somewhat angulated at the base; the two following also short, and of nearly equal length; the remainder produced internally. *Labrum* quadrate, slightly emarginate: *mandibles* triangular, stout, somewhat acute: *palpi*, *maxillary* with the terminal joint longest, ovate, truncate, not dilated; *labial* with the terminal joint long, acute: *head* retuse, not emarginated: *thorax* cylindric, quadrate, produced in the middle behind: *scutellum* transverse: *elytra* very long, subulated, slightly serrated at the apex: *abdomen* stout: *legs* rather slender; *femora* slightly incrassated; *tarsi* with the fourth joint bilobed.

Agrilus appears to differ chiefly from *Buprestis* by its cylindric form of body, short basal joint of the antennæ, quadrate labrum, simple mandibles; slender, somewhat attenuated, terminal joint of the maxillary, and elongate conic terminal one of the labial, palpi; quadrate thorax, &c.

## A. With the body elongate-linear, acuminate.

Sp. 1. *biguttatus*. *Ceruleo-virescens, fronte impressâ, elytris puncto postico impresso albo-villoso, abdomine albo-punctato.* (Long. corp. 4—8 lin.)

Bu. *biguttata*. *Fabricius*.—Ag. *biguttatus*. *Steph. Catal.* 120. No. 1216.

Very brilliant blue- or bronzed-green above: head rugose-punctate, with a deep impression on the forehead: thorax with the disc convex, unequal, transversely rugulose, with a rounded impression in the middle, and another near the base before the scutellum, the sides depressed; elytra depressed on the back, thickly granulated, with a large deep fovea at the base, and towards the apex of each, near the suture, a small white villose spot: abdomen shining blue-green, with three or four brilliant white villose spots on each side: legs and antennæ blue-green, or bronzed.

Colour above very variable, being of various tints of blue, green, bronzed or slightly cupreous.

Not common; though frequently observed at Darenth-wood, where I have at different times taken eight or ten examples in June: it flies with great facility, and delights in settling upon felled timber in a hot day. “Cuckfield.”—*Rev. F. W. Hope*.

Sp. 2. *viridis*. *Viridi-æneus, fronte convexâ, thorace brevissimo transversim impresso, postice angustiori trisinuato.* (Long. corp.  $2\frac{3}{4}$ — $3\frac{1}{2}$  lin.)

Bu. *viridis*. *Linné*.—*Don*. v. pl. 174.—Ag. *viridis*. *Steph. Catal.* 120. No. 1217.

Green- or bluish-brass, with the forehead convex, obscurely foveolated; the thorax very short, thickly shagreened transversely, rather narrowed and trisinuated

posteriorly; elytra very finely wrinkled transversely, immaculate: body rich glossy-bronze beneath: legs and antennæ dull bronze, the latter acutely serrated.

Variable in colour; being of various tints of green and bluish: in some instances the head and thorax are of one tint, and the elytra are of another, but they are mostly concolorous.

The most abundant species of this family in Britain; found very commonly in oaks in Darenth-wood, and also in Kensington-gardens in June and July. "Netley."—*Rev. F. W. Hope*. "Fros-tenden, Suffolk, and once near York."—*W. C. Hewitson, Esq.* "Hornsey-wood."—*A. Cooper, Esq.*

†Sp. 3. chryseis. *Cupreo-purpureus, fronte subcanaliculata, thorace trifoveolato, antennis pedibusque æneo-nigris.* (Long. corp.  $3\frac{1}{2}$  lin.)

Ag. chryseis. *Zeigler*.—*Curtis*, ii. pl. 67.—*Steph. Catal.* 120. No. 1218.

"Golden purple above, beneath metallic, with a blackish tinge, pubescent: head finely and irregularly channelled longitudinally on the crown: thorax finely and irregularly punctured and channelled transversely, the anterior margin slightly elevated, a fovea in the centre near the posterior margin, and an impression on each side: elytra thickly and minutely punctured, having a scabrous appearance, with a few short bristles at the apex: antennæ and legs æneous-black, eyes brownish-black."—*Curtis, l. c.*

I have hitherto seen but two specimens of this insect, one of which was captured in the New Forest, near Brokenhurst, towards the end of September: the other was taken, about the same time, "in Windsor Forest."—*J. H. Griesbach, Esq.*

Sp. 4. amethystinus. *Violaceo-purpureus, antennis pedibusque nigris.* (Long. corp. 3 lin.)

Bu. amethystina. *Olivier. E.* ii. pl. xi. f. 128. a. b.

Rich purple-violet: forehead excavated: thorax slightly dilated on the sides, the disc a little unequal, with two foveæ behind: elytra with a rounded fovea at the base, the surface very obscurely granulated, violaceous-purple: body beneath brassy-violet: antennæ and legs black.

One indigenous example of this species has hitherto come beneath my inspection: it was taken near London, in the spring of 1828.

#### B. With the body cylindric.

Sp. 5. novem-maculatus. PLATE XIX. f. 2.—*Ceruleo-niger, fronte puncto unico thorace duabus, elytris tribus flavis.* (Long. corp. 7 lin.)

Bu. 9-maculata. *Linné*.—Ag. 9-maculata. *Steph. Catal.* 120. No. 1220.

Shining blue-black; forehead with a single round yellow spot: thorax gibbous anteriorly, thickly punctured, with a faint longitudinal impression, and near

the base, towards the anterior angles, two rounded yellow spots: elytra rather irregularly punctate-striated, each with three yellow spots, the basal one being emarginated anteriorly: body slightly pubescent beneath: legs and antennæ blue-black.

The yellow spots vary in form and sometimes in number, especially on the head and thorax; and one of my specimens has two deeply impressed spots anterior to the yellow marks on the thorax.

The only locality I am aware of for this remarkable species, which will probably form the type of a new genus hereafter, is "Cockermouth, in Cumberland, taken abundantly, in July, 1817."—*Dr. Leach*.

GENUS CCXVI.—APHANISTICUS, *Latreille*.

*Antennæ* clavate; basal joint stout, oblong, bent at the base; second globose; five following of nearly equal length, slender; the remainder forming a serrated club, the terminal joint of which is obliquely ovate. *Labrum* entire, widened anteriorly: *mandibles* acute: *palpi*, *maxillary* with the terminal joint short, pear-shaped: *head* deeply emarginate in front: *eyes* small, placed anteriorly: *thorax* margined, subquadrate, narrowed before: *elytra* coarctate towards the base; the apex attenuated and rounded: *wings* short: *femora* very robust; *tibiæ* short, stout; *tarsi* with dilated joints, terminated by a single *claw*.

From the other genera of the family, *Aphanisticus* differs in having the antennæ clavate, the forehead deeply sulcated, the labrum entire, narrowed at the base; the thorax margined, the terminal joint of the maxillary palpi acute, the four basal joints of the tarsi dilated, and the terminal one with a single claw.

Sp. 1. *pusillus*. *Elongatus nigro-æneus, thoracis lateribus explanatis, elytris rudè punctato-striatis*. (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Bu. *pusilla*. *Gyllenhal*.—Ap. *emarginatus*. *Steph. Catal.* 129. No. 1221.—Ap. *pusillus*. *Curtis*, vi. pl. 262.

‡Sp. 6. *Rubi*. *Æneo-niger, elytris fasciis cinereis undatis*. (Long. corp. 6 lin.)

Bu. *Rubi*. *Linné*.—*Turton* (!).—Ag. *Rubi*. *Steph. Catal.* 120. No. 1219, note.

Bronzed-black; forehead with a deep impression: thorax unequal, foveolated: elytra dull bronze, with about four transverse undulated cinereous fasciæ: antennæ and legs black, slightly tinted with æneous.

This species is also indicated as a native of Britain by *Turton*, but without apparent authority.

Elongate: black, tinged with brassy, and very finely granulated: head and thorax slightly punctate, the latter with a transverse impression before and another more obsolete behind the middle: elytra unequal at the base, with several irregular punctate striæ, and an obscure longitudinal impression on the disc.

This remarkable, though minute, insect has been very frequently captured in the broom field near the gravel-pit at Coombe-wood, in the spring, within these few years; and it has also occurred in other places, but sparingly. “Southend.”—*Rev. F. W. Hope*. “Bath, by Dr. Davies; and Kingsbridge, Devonshire, by J. Cranch.”—*Dr. Leach*. “Grassy places, Coombe-wood.”—*Messrs. Ingall, Ingpen, and Westwood*.

### GENUS CCXVII.—TRACHYS, *Fabricius*.

*Antennæ* short, with the two basal joints robust; the four following slender, equal, subovate; the four next produced on the inner edge, the terminal one obliquely ovate. *Labrum* transverse, obscurely emarginate: *palpi* very short, equal: *head* broad, emarginate: *thorax* transverse, sinuated behind: *elytra* broad, nearly triangular, attenuated to the apex: *scutellum* minute: *body* short, obtuse anteriorly, attenuated behind, depressed: *legs* slender; *tarsi* with dilated joints, the terminal joint with two claws.

Trachys may be at once known from the other Buprestidæ by the width and brevity of the body, which is greatly depressed, the robustness of the two basal joints of the antennæ, which are very short, and have the apical half above serrated, somewhat as in *Aphanisticus*, the palpi very short, labrum transverse, &c.

Sp. 1. *pygmæa*. *Capite thoraceque lævibus æneis, elytris cæruleis æqualibus rudè punctatis, corpore nigro-æneo, fronte excavato.* (Long. corp.  $1\frac{1}{2}$  lin.)

Tr. *pygmæa*. *Fabricius*.—*Steph. Catal.* 120. No. 1222.—*Bu. pygmæa*. *Don.* viii. pl. 282.

Head and thorax brilliant glossy-copper, impunctate: forehead excavated: elytra of a rich blue, rudely punctate, the punctures somewhat disposed in striæ towards the suture: body beneath black-brass, a little glossy and finely rugose: legs and antennæ æneous.

Very rare in Britain: three or four examples only have as yet occurred, and of these two in the neighbourhood of Coombe-wood. “Cambridge.”—*C. Darwin, Esq.*

Sp. 2. *minuta*. *Nigro-ænea, subnitida, pilosa, fronte impressâ, elytris inæqualibus saturatioribus, fasciis undatis albido-pilosis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Bu. *minuta*. Linné.—Don. viii. pl. 256.—Tr. *minuta*. Steph. Catal. 120. No. 1823.

Brassy-black or bluish, tinted with cupreous or greenish, slightly shining, pilose: forehead deeply excavated: thorax with a transverse abbreviated striga on each side within the apex, and an entire punctate one within the base: elytra unequal, with obsolete dispersed punctures, and four narrow undulated transverse fasciæ composed of a whitish pubescence: body beneath smooth brassy-black; legs and antennæ black, tinged with brass.

Slightly variable in colour, as above indicated.

Not uncommon on the hazel and birch in Coombe and Darenth-woods, and in other parts in the vicinity of London. “Norwood.”—A. Cooper, Esq.

Sp. 3. *nana*. *Obscure nigro-subænea glabra, fronte excavatâ, elytris triangularibus, punctato-substriatis lineâ laterali elevatâ.* (Long. corp.  $1\frac{1}{4}$  lin.)

Tr. *nana*. Fabricius.—Steph. Catal. 120. No. 1224.

Dull slightly brassy-black, glabrous; the forehead broadly impressed below, the vertex slightly channelled; thorax a little punctate, with the lateral margins on both sides unequally impressed: elytra nearly triangular, above slightly convex, black, with a trifling brassy tinge, glabrous, with rather large impressed dots disposed nearly in rows; and within the lateral margin an elevated abbreviated ridge, which is sometimes rather obsolete: body beneath, legs, and antennæ black, the former scarcely punctulated.

Two specimens are in my collection, taken in Coombe-wood in June, one by myself, the other by a practical collector, the late J. Sharp.

#### GENUS CCXVIII.—MELASIS, Olivier.

*Antennæ* pectinated in the male, serrated in the female; the first joint in the male long and slender; the second minute, globose; third short, subovate; the remainder pectinated: in the female the basal joint long and bent; the second and third of equal length, subcylindric; the remainder produced internally. *Labrum* minute, slightly emarginate: *palpi*, maxillary pilose, with the terminal joint large, dilated in the middle and slightly truncate; *labial* with the terminal joint large, truncated, pilose: *labium* bifid: *head* broad, deeply immersed in the *thorax*, which is emarginate anteriorly, and produced at the posterior angles on each side into an acute spine: *scutellum* elongate: *body* cylindric: *legs* short; *tibiæ* broad, flat; *tarsi* compressed, entire.

The incrassated terminal joint of the palpi forms the most prominent distinction of this genus from its allies, from which it also

recedes by having the thorax somewhat remote from the elytra, and produced at the hinder angles into an acute spine on each side, the antennæ strongly pectinated in the males, and deeply serrated in the females, the body cylindric, the legs short and compressed, the scutellum elongate, and the labrum bifid.

Sp. 1. buprestoides. *Nigra opaca, thorace anticè latiori subcanaliculato, elytrorum striis interruptis, vix punctatis.* (Long. corp. 3—3½ lin.)

El. buprestoides. *Linné.*—*Me.* buprestoides. *Curtis*, ii. pl. 55.—*Steph. Catal.* 121. No. 1225.

Obscure black, sometimes inclining to castaneous, slightly glossy: head pubescent, punctured; forehead convex: thorax with the lateral margins slightly expanded anteriorly, the disc thickly and deeply punctate, slightly pubescent, with an obsolete impressed line down the centre: elytra somewhat rugose, with nine somewhat interrupted punctate striæ, gradually approximating from the base to the apex: body black, thickly punctured; legs, antennæ, and palpi pale rufo-ferruginous.

Variable in colour: in some examples the elytra are more or less castaneous, and the body beneath somewhat rufous.

Found in old decayed trees. Not common near London, but it has been taken in tolerable plenty in the New Forest, by Mr. Chant, who supplied me with specimens, and also by Mr. Millard—it has also occurred near Windsor, where it was captured by Mr. Herschel, and also in the neighbourhood of Halesworth, Suffolk.

### FAMILY XXXIII.—ELATERIDÆ, *Leach.*

*Antennæ* not very short, filiform, sometimes serrated or pectinated: *palpi* with the terminal joint generally triangular or reniform: *mandibles* notched or bifid at the apex: *body* linear, depressed: *thorax* with the hinder angles produced into a sharp tooth; the lateral margin beneath with a groove to receive the antennæ: *sternum* produced behind into a sharp mucro, capable of being applied at the will of the animal to a groove at the base of the abdomen, placed immediately between the origin of the second pair of *legs*; all the latter very short. The females have an elongated ovipositor, composed of three pieces, the lateral ones being pointed at the apex.

The Elateridæ, exclusively of their elongate form, may be at once known from the other families of Coleoptera, by the sternum being produced behind into an elongate spine, which fits into a groove at the base of the abdomen, so that when the insect is laid on its back, it is enabled to recover its position by bending the head

and thorax backwards, and suddenly striking the spiniform process of the sternum against the base of the abdomen, by which means it is thrown up a considerable height, and usually alights on its feet.

The species frequent flowers and plants, or on grass, in the trunks and beneath the bark of decayed trees: they are rarely of brilliant colours, like the Buprestidæ.

The larvæ are long, nearly cylindric, provided with short antennæ and palpi and six legs; the body is composed of twelve rings covered with a hard scaly skin, the anterior extremity being produced into a margined plate, the edges of which are angular, and furnished with two soft processes curved within, and beneath which is a large fleshy retractile tubercle, which performs the office of a foot:—they reside beneath the ground, in rotten wood.

The indigenous species, which are rather numerous, may be divided into the following genera, of equal rank with those of the Harpalidæ, thus briefly characterized:

Antennæ

articulis 2is et 3is elongatis; <i>ultimo</i>	{ elongato, subacuto: . 221. CATAPHAGUS.  breve, obliquè truncato: . 223. HYPNOIDUS.	
articulis 2is et 3is brevissimis, subglobosis; <i>ultimo</i>	{ elongato, gracile: . 224. PERIMECUS.  ad apicem abruptè acuminato: 225. LUDIUS.  breve, { simplice: . 222. ELATER.	
articulo 2o brevissimo, globoso, 3o elongato; <i>Tarsi</i> articulo 4to	{ simplice <i>Thorax</i>  gibbosus. <i>Tarsi</i> articulo basali { magno, elongato: . 220. EUCNEMIS. mediocre, subbreviore: <i>Corpus</i> { subgracile: 228. EUDERUS. latum: 227. SELATOSOMUS.  subdepressus, haud gibbosus. <i>Oculi</i> { mediocres, vix prominentes: 226. CTENICERUS. magni, prominentes: 230. CAMPYLUS,	
dilatato aut bifido.	{ <i>Corpus</i> subconvexum: . 229. ANATHROTUS. depressum: . 219. CERATOPHYTUM.	

GENUS CCXIX.—CERATOPHYTUM, *Leach*.

*Antennæ* rather long, pectinated on the inner side in the males, serrated in the females; the third joint with the pectination longer than the rest; the apex rounded, incrassated. *Palpi*, *maxillary* with the last joint very much incrassated, oval, somewhat obliquely truncate: *maxillæ* bilobed: *mandibles* entire: *body* oval; depressed: *tarsi* with the last joint bifid.

Ceratophytum of Leach—Cerophytum of Latreille—is to be distinguished from the allied genera by having the antennæ of the males considerably pectinated; the maxillary palpi with the terminal joint very thick, oval, and somewhat truncate; the maxillæ bilobed, the mandibles entire; body depressed; tarsi with the last joint bifid.

† Sp. 1. *Latreillii*. *Nigrum, elytris striatis, thorace subconvexo, antennis nigricantibus*. (Long. corp. 3? lin.)

Ce. *Latreillii*. *Leach MSS.—Steph. Catal.* 121. No. 1226.

Black, elytra striated; the thorax slightly convex; the antennæ and legs dusky. The insect to which the above name has been applied is in the collection at the British Museum; but some doubt hangs over its identity with the Cerophytum elateroides of Latreille, as its characters appear rather to partake of those of the genus Eucnemis than the Cerophytum; but I have not at this moment the opportunity of examining the insect in question; therefore I am compelled to notice the suspicions which have been pointed out to me by Mr. Westwood, until I am enabled to inspect the specimens.

The specimen above alluded to, with others, was taken by Mr. Millard, I believe, in the neighbourhood of Bristol.

GENUS CCXX.—EUCNEMIS, *Mannerheim*.

*Antennæ* slightly serrated, approximating at the base; the basal joint elongated; the second minute; the third longer, subcylindric; the remainder cup-shaped, and rather increasing to the extremity; the terminal joint oblong-ovate, acuminate. *Labrum* membranaceous, nearly entire: *mandibles* unidentate: *palpi* thickened towards the apex, with the terminal joint oblong-ovate, subsecuriform: *maxillæ* bifid: *labium* subemarginate: *head* deflexed: *thorax* truncate anteriorly; bisinuated behind; closely applied to the base of the *elytra*, which are slightly attenuated: *legs* short; *femora* compressed; *tarsi* with the basal joint large, elongate, the remainder short.

The chief characters of the genus Eucnemis, according to Mannerheim, consist of the approximating antennæ, which have the first



joint elongate, the second minute; labrum membranaceous, nearly entire: the palpi thickened towards the apex, with the last joint oblong-ovate, and slightly reniform; the maxillæ bifid; mandibles unidentate, &c.:—the species inhabit rotten wood.

† Sp. 1. pygmæus. *Lineari-elongatus, ater, griseo-pilosus, antennis tibiis tarsisque rufescentibus, thorace sublongiore, elytris evidentiùs striatis.* (Long. corp.  $2\frac{1}{2}$  lin.)

El. pygmæus. *Fabricius?*—Eu. pygmæus. *Steph. Catal.* 121. No. 1227.

Linear-elongate, black, clothed with a griseous pubescence: with the antennæ externally perfoliated: the head punctured, with an elevated ridge on the vertex: the palpi rufous: antennæ black at the base, rufescent at the apex: thorax slightly elongate, punctulate: elytra flat on the back, thickly rugose-punctate, obsoletely striated, the striæ deepest towards the apex: tibiæ and tarsi rufescent: femora piceous.

Of this insect a single specimen is in the collection of N. A. Vigors, Esq., who obtained it from that of Mr. Wilkin: of its locality I am not aware; but I believe it was found in Norfolk.

#### GENUS CCXXI.—CATAPHAGUS\* *mihi*.

*Antennæ* rather slender; the basal joint robust, elongate, slightly bent; the second and third slender, equal, each about as long as the fourth, which, with the remainder, is obconic; the terminal joint being longest and subovate. *Mouth* deflexed: *head* retracted, deflexed; *forehead* very convex: *eyes* small: *thorax* very convex, depressed at the base, the posterior angles forming an elongate robust spiniform process: *body* oblong, or linear-elongate: *elytra* convex, slightly acuminate behind: *scutellum* depressed: *legs* short; *femora* slightly incrassated: *tibiæ* slender, simple; *tarsi* simple.

This genus may be readily known from the other Elateridæ by having the second and third joints of the antennæ slender and somewhat elongated, with the terminal joint considerably longer than the preceding, somewhat slender and subacute; the head is

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\* Latreille, in his *Familles Naturelles*, employs the term *Hemirhipus* for a genus, giving *Elater lineatus* as the type, but without characters, which, however, he has supplied in the new edition of the *Règne Animal*, whence it appears that *E. lineatus* of Fabricius, not of Linné, is the insect intended by him. I have therefore been compelled to propose a new appellation for the indigenous genus, from *Καταφάγω*, *devoro*, in allusion to the destructive propensities of the larvæ, called *wire worms*, of the type *C. lineatus*, Linné.

deeply retracted, the forehead very convex, as are also the thorax anteriorly, and the elytra.

A. With the thorax sublinear: the body linear-elongate.

Sp. 1. *limbatus*. *Niger pubescens, antennis pedibusque pallidè ferrugineis, elytris testaceis, suturâ margineque nigro-fuscis.* (Long. corp. 2—2½ lin.)

El. *limbatus*. *Fabricius*.—He. *limbatus*. *Steph. Catal.* 121. No. 1228.

Linear-elongate, scarcely acuminate behind; black, pubescent: head a little glossy, thickly punctured in front: thorax with the lateral edges immarginate, the disc very glossy, finely punctured, with the anterior edge and sometimes the posterior spinous processes testaceous; scutellum black: elytra moderately convex, rather deeply punctate-striate, the interstices somewhat punctulated, testaceous, with the suture and margin fuscous-black: body beneath black, with the apex testaceous: legs and antennæ pale-ferruginous. Rather variable in colour; the elytra being sometimes without the coloured suture and margins.

Extremely abundant within the metropolitan district in grassy and woody places; and I believe in other parts of the country. “Tamerton and Woodland, Devon; and Pencarrow, Cornwall.”—*Dr. Leach*. “Common among grass in woods and pastures (near Swansea).”—*L. W. Dillwyn, Esq.* “Bottisham, Wilbraham, &c., Cambs.”—*Rev. L. Jenyns*. “Epping.”—*Mr. Doubleday*.

Sp. 2. *acuminatus*. *Lineari-elongatus posticè subattenuatus, fuscus pubescens, antennis pedibusque testaceis, elytris fuscescentibus, vittâ posticâ testaceâ.* (Long. corp. 2½—3 lin.)

He. *acuminatus*. *Steph. Catal.* 121. No. 1229.

Linear-elongate, slightly attenuated behind; fuscous pubescent: head and thorax a little shining, obscurely punctured, the posterior angles of the latter dull-testaceous: scutellum dull ochreous: elytra fuscescent, with an elongate vitta on the disc at the apex, obscurely striated, the interstices thickly punctured: body beneath dull black, with the apex rather slightly testaceous: antennæ and legs testaceous.

Larger than the foregoing, with the elytra more acuminate behind, and of a dusky hue, the scutellum pale, the head and thorax fuscous, the latter with its sides concolorous, &c.

Occasionally found in hedges near London and in Devonshire. “Gravel-pits, Coombe-wood.”—*Mr. Ingpen*.

Sp. 3. *marginatus*. *Fusco-piceus, thoracis limbo pedibusque rufo-ferrugineis, elytris testaceis, suturâ margineque nigris.* (Long. corp. 3—3½ lin.)

*El. marginatus*. Linné.—*He. marginatus*. *Steph. Catal.* 121. No. 1230.

Pitchy-brown, slightly pubescent: head dusky; forehead very prominent, thickly punctured: thorax sublinear, moderately convex, closely punctate, black, with the angles and lateral margins more or less testaceous; sometimes of the latter colour, with a dusky spot in the middle of the disc: scutellum dusky-testaceous: elytra sublinear, slightly convex, regularly punctate-striated, the interstices thickly rugose-punctate, pale testaceous, with a broad fuscous-black common patch on the back, attenuated and nearly evanescent towards the apex, the lateral margins sometimes slightly dusky: sides and apex of the abdomen, legs, and antennæ, testaceous.

Extremely variable in colour, some examples being of an uniform testaceous hue, and all intermediate grades between that and the above described occurring.

Very common in woods throughout the metropolitan district: also found in Devonshire, Norfolk, &c. “Baron Wood.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday*. “Neighbourhood of Bottisham, common.”—*Rev. L. Jenyns*. “Common in woods and among herbage (near Swansea).”—*L. W. Dillwyn, Esq.*

**B. With the forehead and thorax very convex; body oblong.**

Sp. 4. *sputator*. *Niger pubescens, subnitidus, thorace longiori, antennis, elytris pedibusque testaceis*. (Long, corp. 3—3½ lin.)

*El. sputator*. Linné.—*He. sputator*. *Steph. Catal.* 121. No. 1231.

Black, pubescent, slightly shining: thorax rather longer than broad, its lateral margins nearly straight, immarginate, the disc very thickly punctate, with an obsolete channel, black, with the exterior edge of the anterior margin and the posterior angles testaceous: scutellum dusky-testaceous: elytra a little attenuated at the apex, rather deeply punctate-striate, the interstices faintly punctate, sometimes obscure testaceous, or pitchy-fuscous, or nearly black: abdomen sometimes piceous: legs and antennæ testaceous; the former sometimes dusky.

Smaller, more glossy, with the thorax less gibbous, and the antennæ and legs generally paler than the following insect.

Very abundant in meadows and pastures, I believe, throughout England. “This and the two following species in profusion, in rejectamenta, after a flood, Hackney Marshes.”—*Mr. Ingpen*. “Epping.”—*Mr. Doubleday*. “Common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 5. *obscurus*. *Brevis nigro-fuscus, pubescens, opacus, anticè obtusus, thorace gibbo, antennis pedibusque fusco-testaceis*. (Long, corp. 4—4½ lin.)

El. obscurus. *Linné*.—*He. obscurus. Steph. Catal. 122. No. 1232.*

Short, robust; fuscous-black, pubescent, opaque, very obtuse anteriorly: thorax very much, but rather finely, punctured, with the sides rounded, dilated in the middle, slightly margined, the disc very convex, with an obsolete channel at the base: scutellum black: elytra attenuated at the apex, faintly punctate-striated, with the interstices thickly punctulate, pale dusky-black, and slightly pubescent: body beneath black, thickly punctured: femora pitchy-black; tibiae, tarsi, and antennæ dusky-ferruginous.

Slightly variable in colour, being more or less testaceous.

Considerably larger than the preceding, from which it may be known by its shorter and more gibbous thorax, more opaque surface, fuscous legs and antennæ.

Also found copiously in meadows and pastures throughout England. “Brugh Marsh.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.* “This, the preceding, and the following species, very abundant in Cambridgeshire; the larvæ committing great depredations at the roots of grass, &c.”—*Rev. L. Jenyns.* “Common in woods, grass fields, and on the sand-hills (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 6. lineatus. *Fuscus, griseo-pubescent, antennis pedibusque testaceis, elytris griseis, fusco-lineatis.* (Long. corp. 4—4½ lin.)

El. lineatus. *Linné*.—*He. lineatus. Steph. Catal. No. 122. No. 1233.*—Wire-worm. *Insect Transformations, fig. in p.*

Fuscous, clothed with a griseous pubescence: head and thorax blackish, the latter with the lateral margins nearly straight, and the posterior angles very acute; the disc very convex and closely punctate: scutellum fuscous: elytra broad, a little attenuated, rounded at the apex, very convex, punctate-striated, the striæ disposed in pairs and united at the apex; griseous-yellow, with the alternate narrowed interstices fuscous or dusky: margins and apex of the abdomen ferruginous: antennæ and legs rufo-testaceous, the femora sometimes dusky.

Also a little variable in colour, being more or less fuscous or testaceous.

Less abundant than the two preceding species, though far from rare throughout the metropolitan district and elsewhere; and near Edinburgh. “Not uncommon among grass (near Swansea).”—*L. W. Dillwyn, Esq.* “Dalston, Armathwaite, &c.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.*

GENUS CCXXII.—ELATER *Auctorum*.

*Antennæ* short, with the basal joint generally robust, sometimes elongate; the second and third joints small, subglobose, the remainder more or less conic, and usually produced on the outer edge, into a serrated margin; the apical joint rarely larger than the preceding, and ovate simple. *Mouth* rarely deflexed: *head* small, generally retracted: *eyes* small: *thorax* various; generally rather elongate, the posterior angles more or less produced: *body* slightly convex, linear-elongate, sometimes subovate: *legs* short; *tarsi* simple.

From Cataphagus the present genus may be at once known by having the second and third joints of the antennæ short, and usually subglobose, with the terminal one more or less elongate, the body frequently depressed and broad; but as the genus at present stands, it contains insects of sufficient dissimilarity to warrant the adoption of various subdivisions, several of which will doubtless be hereafter formed into genera.

## A. With the body more or less cylindric.

a. *With the thorax short, convex anteriorly; (mouth deflexed).*

Sp. 1. fugax. *Niger, punctatissimus, aureo-pubescens, elytris castaneis, tibiis tarsisque ferrugineis.* (Long. corp.  $3\frac{1}{2}$  lin.)

El. fugax. *Fabricius.—Steph. Catal. 122. No. 1234.*

Rather slender, attenuated posteriorly: black, very finely and thickly punctured, and clothed with a golden pubescence: thorax immaculate; longer than broad: elytra castaneous, or dull-brown, rather faintly striated, the interstices punctured: body beneath black, with the apex sometimes slightly testaceous: femora black, the apex, with the tibiæ and tarsi, ferruginous; antennæ black, or dusky.

Gyllenhal suspects this species may be merely the other sex, or a variety of the following; a suspicion I do not feel justified in confirming, never having taken either of the insects; and my own examples being only the extreme varieties\*.

My specimens of this insect were captured in June, 1821, in the New Forest, Hants, near Brockenhurst.

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\* The fallacies arising from *contrasted descriptions* of the *extreme varieties* of *unstable* insects will be pointed out in my observations on the genus *Necrodes*, in the Appendix.

Sp. 2. brunneus. *Rufo-ferrugineus, punctatissimus, capite, antennis thoracis disco, pectore abdominisque basi nigris.* (Long. corp. 4 lin.)

El. brunneus. Linné.—*Steph. Catal.* 122. No. 1235.

Head black, opaque; forehead thickly punctate: thorax black, with the anterior and posterior angles more or less ferruginous; beneath rufo-ferruginous, with a linear patch in the middle behind, and the breast black: scutellum depressed, black: elytra castaneous-brown, faintly striated: abdomen rufo-ferruginous, with the base black; legs testaceous, with the base of the femora sometimes dusky: antennæ black, with the basal joint occasionally testaceous.

With the lateral margins of the thorax above more or less broadly ferruginous.

Whether the *Elater maritimus*, Curtis (*Steph. Catal.* No. 1236.), belongs to one of the varieties of this species, I have no means of ascertaining; but from an inspection of the specimens brought from the north by Mr. Dale, I believe such to be the case.

Rare near London; but more frequent in the New Forest, in company with the preceding species, of which it may possibly be the female.

Sp. 3. fulvicollis. *Niger, thorace toto rufo-fulvo, elytris nigro-cærulescentibus.* (Long. corp. 4 lin.)

El. fulvicollis. *Steph. Catal.* 122. No. 1337.

Head black: thorax above entirely bright fulvous-red, clothed with a rufous pubescence, and rather coarsely punctured: scutellum depressed, black: elytra of a deep blue-black, clothed with a short flavescent pile, rather faintly punctate-striate, the interstices transversely rugulose: antennæ, legs, and body beneath black, with the margins of the thorax beneath concolorous with the upper surface, being clear fulvous-red: antennæ remote at the base.

This beautiful insect resembles *Ctenicerus sanguinicollis*, but the antennæ are remote at their origin, the second and third joints are minute, the thorax very gibbous, &c.

My specimen of this handsome species was captured, I believe, near Bristol.

Sp. 4. aterrimus. *Elongatus, niger, opacus, punctatissimus, thorace sublinearis posticè canaliculato, pedibus fusco-piceis.* (Long. corp. 5—6½ lin.)

El. aterrimus. Linné.—*Steph. Catal.* 123. No. 1254.—El. atratus. Illiger, *M.* iv. 100.—El. obscurus. Olivier, *E.* ii. 29. pl. 8. f. 76.—El. nigrinus. Herbst, *C.* x. 43. pl. 161. f. 11.—El. pilistriatus. *Zool. Journal*, (*Pelerin*) iv. p. 211.

Elongate, black, opaque, thickly punctate: head small, with an ochreous pubescence: thorax with the posterior angles stout, acute, elongated, prominent; the disc very convex, especially in front, the base with an impressed line: elytra slightly shining, crenate-striated, the interstices thickly punctate,

each with a row of short hairs: body clothed with a silvery pubescence beneath: legs piceous, with the tarsi reddish: antennæ black.

Very scarce near London—two examples only, so far as I am aware, having hitherto occurred in the neighbourhood thereof: these were taken by Mr. Pelerin, near Twickenham, in July, 1828. “Near Deal, in June, 1828.”—*Rev. F. W. Hope*. “Occasionally found among herbage (near Swansea).”—*L. W. Dillwyn, Esq.*

b. *With the thorax rather elongated, gibbous in the middle.*

Sp. 5. *cylindricus*. *Elongatus, angustus, fusco-æneus, pubescens, thorace punctato, antennis longioribus subserratis, sterno canaliculato.* (Long. corp. 5—5½ lin.)

El. *cylindricus*. *Paykul.*—*Steph. Catal.* 122. No. 1338.

Elongate, narrow, æneous-brown, pubescent: head finely punctured; forehead broad, subfoveolated: thorax slightly elongate, thickly punctate, and obsoletely channelled behind: elytra considerably elongated, with the apex somewhat acute, rather faintly punctate-striate, with the interstices delicately punctured: body blackish-brass beneath: the pectoral mucro incurved, with a distinct longitudinal furrow; legs and antennæ brassy-black, the latter distinctly longer than the thorax.

Sometimes taken in the hedges near Birch-wood, but not common near London; it also occurs in Norfolk and Suffolk. “Occasionally in pastures (near Swansea), and not uncommon on Crwmllyn and Sketty Burrows.”—*L. W. Dillwyn, Esq.* “Bristol.”—*Dr. Leach*.

Sp. 6. *nigripes*. *Elongatus, fusco-æneus, pubescens, thorace brevi punctatissimo, antennis brevioribus subserratis, sterno convexo.* (Long. corp. 6 lin.)

El. *nigripes*. *Gyllenhal.*—*Steph. Catal.* 122. No. 1239.

Elongate, æneous-brown, pubescent: head deeply punctate; forehead broad, flat, subfoveolated, truncate anteriorly, with the margin slightly reflexed: thorax short, very thickly and deeply punctate, with a distinct dorsal furrow: elytra rounded at the apex, distinctly punctate-striated, with the interstices evidently punctulated: sternum subconvex, deeply punctate, and obscurely channelled: legs and antennæ æneous-black, the latter shorter than the thorax.

It is very probable that this insect may be merely the female of the foregoing, from which it chiefly differs in its greater bulk, by the brevity of its antennæ and thorax, the more deeply punctate surface, and convex scutellum.

Found with the preceding near London and in Suffolk. “Taken among grass (near Swansea).”—*L. W. Dillwyn, Esq.*

c. *With the thorax oblong, convex behind.*

Sp. 7. *serraticornis*. *Oblongus, nigro-subæneus, thorace longiori punctato, antennis longis acutè serratis, pedibus fuscis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

El. *serraticornis*. *Paykul.*—*Steph. Catal.* 122. No. 1240.

Oblong, brassy-black: head broad, with a triangular impression on the front, which is obtuse: thorax longer than broad, the lateral edge a little rounded, the posterior angles rather elongated, stout, acute: the disc thickly punctulated: scutellum ovate; elytra linear-elongate, with the apex acuminate, the disc slightly convex, faintly punctate-striated, with the interstices thickly punctulated: femora piceous; tibiæ and tarsi fuscous: antennæ about half the length of the body, black, deeply and acutely serrated.

The acutely serrated antennæ and elongate thorax distinguish this from the following species.

Occasionally taken within the metropolitan district, but more abundant near Bristol and its vicinity. “Wood Ditton, Cambs, on the flowers of the white-thorn.”—*Rev. L. Jenyns.*

Sp. 8. *minutus*. *Lineari-elongatus, niger, pubescens, thorace punctato nitido, oblongo, elytris subdepressis vix nitidis, pedibus nigris.* (Long. corp.  $3-3\frac{1}{4}$  lin.)

El. *minutus*. *Linné.*—*Steph. Catal.* 122. No. 1241.

Linear-elongate, black, slightly pubescent: head short, deeply punctate, with the front irregularly impressed, and the anterior margin subtruncate, reflexed: thorax oblong, sublinear, with the sides straight, the posterior angles short, obtuse: scutellum oblong, rounded at the apex: elytra elongate, linear, with the apex rounded, slightly depressed above, punctate-striate, the interstices flat, obsoletely punctured, the sutural stria most evident; body deeply punctured, æneous: legs black, with fuscous tarsi: antennæ black, rather acutely serrated.

Very abundant in hedges within the metropolitan district: also found near Edinburgh. “Epping.”—*Mr. Doubleday*. “Not uncommon among grass (near Swansea), particularly in woods.”—*L. W. Dillwyn, Esq.*

Sp. 9. *nigro-æneus*. *Lineari-elongatus, supra nigro-æneus, subtus ater, thorace nitido.* (Long. corp.  $3-3\frac{1}{2}$  lin.)

El. *nigro-æneus*. *Marsham.*—*Steph. Catal.* 122. No. 1242.

Linear-elongate, above black-brass, beneath deep black; thorax very shining, obsoletely punctate: elytra faintly striated, rather glossy: legs and antennæ black.

This insect is certainly distinct from the *Elater Bructeri*, to which it is referred by Gyllenhal: it is probably a mere variety of the last described.



Found, but not commonly, within the metropolitan district. “Epping.”—*Mr. Doubleday*.

†Sp. 10. *Bructeri*. *Oblongus, fusco-æneus, convexus, thorace breviori punctato, elytris punctatissimis obsolete striatis, pedibus fusco-pallidis*. (Long. corp.  $2\frac{1}{2}$  lin.)

El. *Bructeri*. *Fabricius*.—*Steph. Catal.* 122. No. 1243.

Oblong, convex, brown-brass: the forehead subfoveolate: thorax rather short, punctate, slightly bisinuated in front, the sides a little rounded, with the posterior angles short, stout, rather acute: the disc somewhat deeply, but not thickly, punctate: scutellum rounded: elytra elongate, with the apex acuminate; the disc with obsolete, scarcely punctate, striæ, with the interstices thickly punctured: body glabrous beneath, slightly punctate: femora dusky-piceous; tibiæ and tarsi paler: antennæ black, slender, simple, with the third joint not much less than the following.

This species has been captured, I believe, in Norfolk.

†Sp. 11. *nigrinus*? *Lineari-elongatus, ater opacus, thorace suboblongo punctatissimo, angulis posticis elongatis, carinâ elevata, elytris subdepressis transversim rugoso-punctatis*. (Long. corp.  $3\frac{1}{2}$  lin.)

El. *subrugosus*. *Steph. Catal.* 123. No. 1244?—El. *nigrinus*. *Paykul*, iii. 39?

Linear-elongate, deep opaque black, slightly pubescent: forehead convex, punctured: thorax somewhat oblong, the disc very thickly, but not deeply punctate, the punctures somewhat confluent, the base with a small impression in front of the scutellum; the posterior angles considerably elongated, with a distinct elevated ridge: elytra somewhat narrower than the thorax, depressed, a little shining, and clothed with a short hoary down, striated, the interstices thickly and transversely rugose-punctate: legs and antennæ black: the second and third joints of the latter, as in the rest of the genus, distinctly smaller than the remainder, which are conic.

In the possession of Mr. C. Griesbach I once observed an insect of this genus, which was evidently different from any that I possessed, or had seen in any other collection, to which I applied the name *subrugosus*: I had not the opportunity of taking a description, but as, from my recollection of the insect in question, I have no doubt of its identity with the above, I have referred thereto with doubt, in case upon comparison it should prove distinct. The insect above described ill associates with this section.

A single example taken “near Cobham, in Sept. 1828.”—*A. Cooper, Esq.* The specimen in Mr. Griesbach’s collection taken, I believe, near Windsor.

B. With the body more or less depressed.

a. *With the thorax equal, the sides not dilated.*

Sp. 12. ephippium. *Ater, hirtus, elytris sanguineis maculâ suturali oblongâ nigrâ, tarsis piceis.* (Long. corp. 5—6 lin.)

El. ephippium. *Fabricius.*—*Steph. Catal.* 123. No. 1245.

Black: head and thorax clothed with short rufescent hairs, with a lanceolate black patch on the suture, common to both elytra, more or less broad, and neither touching the base nor the apex; scutellum, antennæ, and legs black; tarsi piceous.

Very rare near London, and not common in other parts, though seemingly very much distributed over the country. “Oxford.”—*Rev. F. W. Hope.* “Bewdley Forest.”—*W. Raddon, Esq.* “Epping Forest, near Wanstead.”—*Mr. Stone.* “Christchurch, by Rev. W. Bingley, and Salisbury.”—*Dr. Leach.*

Sp. 13. sanguineus. *Ater, pube rufescente vestitus, thorace obsolete canaliculato, elytris sanguineis immaculatis, tarsis piceis.* (Long. corp. 4—6½ lin.)

El. sanguineus. *Linné?*—*Don. xv. pl.* 508. f. 2.—*Steph. Catal.* 123. No. 1246.

Black: head and thorax clothed with a short rufescent down, the latter somewhat convex, punctured, with an obsolete channel behind: elytra bright immaculate blood-red, punctate-striated, sparingly clothed with short rufous hairs; antennæ and legs black; tarsi piceous.

Whether this be the true *E. sanguineus* of Linné, his concise definition does not satisfactorily enable me to decide; as his description will equally apply to this and the three following species, whose specific distinctions were first noticed by Count Hoffmansegg, and pointed out by him to Dr. Leach, who supplied me with the specimens whence the following descriptions have been drawn up:—this, which is the largest, species may be readily known by having the pubescence above entirely rufescent.

Also rare near London: it has been taken in the woods between Highgate and Hampstead, and in Epping Forest and Coombe; but in the New Forest it has occurred in the utmost profusion on oaks. “Barmouth.”—*Rev. F. W. Hope.* “Salisbury and Spitchweek Park in July.”—*Dr. Leach.*

Sp. 14. rufipennis. *Ater, pube fusco vestitus, thorace subcanaliculato, elytris sanguineis immaculatis, tarsis nigro-piceis.* (Long. corp. 5—6 lin.)

El. rufipennis. *Hoffmansegg MSS.*—*Steph. Catal.* 123. No. 1247.

Black: head and thorax densely clothed with a deep fuscous or black down, the latter a little depressed and coarsely punctate, obsoletely channelled behind: elytra punctate-striate, blood-red, immaculate, sparingly clothed with short fuscous hairs: antennæ and legs black; tarsi dusky piceous.

In general smaller than the foregoing, with the pubescence above entirely fuscous or black.

Not common: found in various parts of the West of England, and in the New Forest. “Bagley-wood, Oxon.”—*Rev. F. W. Hope.*

Sp. 15. *semiruber.* *Ater, capite thoraceque fusco-hirtis, elytris testaceo-sanguineis pube rufescenti adspersis, tarsis piceis.* (Long. corp. 5—6 lin.)

El. *semiruber.* *Hoffmansegg MSS.—Steph. Catal. 123. No. 1248.*

Rather narrow, black, the head and thorax clothed with a fuscous or black pubescence; the latter somewhat depressed, rather coarsely punctate, and not channelled behind: elytra punctate-striate, pale immaculate blood-red, sparingly clothed with short rufous hairs: antennæ and legs black; tarsi piceous.

More slender, but as long as the preceding insect; the head and thorax alone clothed with black, and the elytra with rufous, down.

Taken near Brockenhurst, in the New Forest; also, I believe, near Bristol. “Taken on Crwmllyn Bog, by Mr. Millard.”—*L. W. Dillwyn, Esq.*

Sp. 16. *Pomonæ.* *Ater, fusco-hirtus, thorace convexiori, elytris sanguineis apice summo nigris, tarsis piceis.* (Long. corp.  $4\frac{1}{2}$ — $5\frac{1}{2}$  lin.)

El. *Pomonæ.* *Hoffmansegg MSS.—Steph. Catal. 123. No. 1249.*

Rather narrow, black, clothed with a fuscous or black pubescence; thorax somewhat convex, moderately punctured: elytra punctate-striate, blood-red, with the tip alone black: antennæ and legs black; tarsi pitchy.

In form similar to the last, but clothed entirely above with a fuscous pubescence, and the elytra with a small patch of black at the extreme tip.

This species has occurred at Darent-wood, but no other part in the vicinity of the metropolis that I am aware of. “Barmouth.”—*Rev. F. W. Hope.*

Sp. 17. *præustus.* *Ater, capite thoraceque nigro lineatis, elytris sanguineis apice summo nigris, rufo-hirtis, tarsis ferrugineis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

El. *præustus.* *Fabricius.—Steph. Catal. 123. No. 1250.*

Black: head and thorax densely clothed with a black pubescence; the latter very obsoletely punctate: elytra blood-red, with the apex black, the surface sparingly clothed with rufous hairs: antennæ and legs black; tarsi ferruginous.

Considerably less than either of the foregoing, with the thorax almost impunctate, and with the head clothed with black down; the elytra blood-red, with a rather large patch of black at the tip, and sparingly clothed with rufous hairs.

The only locality I know for this insect, which is far from

common, is a portion of the western edge of Darenth-wood, where I have taken at different periods eight or ten specimens. "Nuthurst, Sussex."—*Rev. F. W. Hope*.

Sp. 18. *balteatus*. *Ater, hirtus, antennis pedibusque piceis, elytris anticè ultra medium rufo-ferrugineis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

El. *balteatus*. *Linné*.—*Wood*, i. pl. 21.—*Steph. Catal.* 123. No. 1251.

Black, pubescent: head thickly punctate, with the front rounded: thorax glossy, convex above, and rather thickly, but not coarsely, punctured: elytra deeply punctate-striate, the interstices punctured; from the base to beyond the middle rusty-red, with a broad black patch occupying the entire apex: legs piceous, with the tarsi pitchy-red; antennæ dusky at the base, rufescent at the apex.

Found in Coombe, Darenth, and Birch woods, and in the adjoining lanes, but not common: also in Norfolk, and other parts. "Nuthurst."—*Rev. F. W. Hope*. "Prestwick Carr, near New-castle."—*W. C. Hewitson, Esq.* "Windsor, and Kingsbridge, Devon."—*Dr. Leach*.

b. *With the thorax unequal, the sides dilated.*

1. With the body slightly pubescent, and depressed.

Sp. 19. *ustulatus*. *Niger, antennis simplicibus, elytris rufo-testaceis immaculatis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

El. *ustulatus*. *Paykul*.—*Steph. Catal.* 123. No. 1252.

Black, somewhat depressed, slightly pubescent: head and thorax finely punctured, the latter dilated in the middle, with the posterior angles small and but slightly prominent, the disc glossy, very convex: elytra entirely of a pale testaceous-red, punctate-striate, the striæ rather shallow: legs dusky, with the tibiae and tarsi more or less pale testaceous: antennæ fuscous, or piceous.

Found in the New Forest, and the vicinity, but rare: also in the Isle of Wight. "Nuthurst."—*Rev. F. W. Hope*.

Sp. 20. *bipustulatus*. *Oblongus, niger, thorace convexo nitido, elytris depressis, maculâ baseos rubrâ, pedibus piceo-testaceis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

El. *bipustulatus*. *Linné*.—*Steph. Catal.* 123. No. 1253.

Oblong, black, depressed, slightly pubescent: head rugosely-punctate, with the front unequal and foveolated: thorax dilated on the sides, the disc very convex and glossy, finely punctured; the posterior angles prominent, acute: elytra depressed, dilated in the middle, rounded at the apex, punctate-striated, with the interstices punctulated, slightly shining-black, with a more or less distinct ovate rufous spot on the shoulder: legs and suture pitchy-testaceous; tarsi paler.

The red spot at the base of the elytra is sometimes obsolete.

Apparently not uncommon near Brockenhurst and its neighbourhood, in the New Forest: also found occasionally near London and in Norfolk. “Bagley-wood.”—*Rev. F. W. Hope*. “Bot-tisham, under felled timber, once taken.”—*Rev. L. Jenyns*. “Epping.”—*Mr. Doubleday*. “Kimpton.”—*Rev. G. T. Rudd*.

2. With the body densely pubescent, and slightly convex.

\* *With the second joint of the antennæ not dilated, rather shorter than the third.*

Sp. 21. holosericeus. *Nigricans, supra pube holosericeâ griseo-pallescente subfasciatus, pedibus fusco-testaceis.* (Long. corp.  $4\frac{1}{2}$ —6 lin.)

El. holosericeus. *Fabricius*.—*Steph. Catal.* 123. No. 1255.

Dusky, clothed above with a rich pale-griseous silken pubescence forehead slightly impressed: thorax a little dilated on the sides, the posterior angles acute, with an elevated ridge, the disc very convex, not foveolated, the pubescence of changeable gloss according to the reflexion of the light: elytra dilated on the sides, attenuated towards the apex, slightly convex, faintly striated, the interstices very finely punctulated, the pubescence disposed as on the thorax, and producing the appearance of fuscous or pale fasciæ, agreeably to the position of the light: body pubescent beneath: legs testaceous-brown, with the tibiæ and tarsi paler: antennæ black.

An abundant species near London, especially at Coombe and Darenth woods. “Near Newcastle.”—*W. C. Hewitson, Esq.* “Epping.”—*Mr. Doubleday*. “I believe it has been taken by Mr. Millard (near Swansea).”—*L. W. Dillwyn, Esq.* “Edinburgh, Devonshire, &c.”—*Dr. Leach*.

\*\* *With the second joint of the antennæ dilated, and larger than the third, the first joint very robust.*

Sp. 22. murinus. *Latus, fusco-nigricans, pubescens, albido variegatus, thorace inæquali, antennis tarsisque ferrugineis.* (Long. corp. 5— $8\frac{1}{2}$  lin.)

El. murinus. *Linné*.—*Martyn, pl.* 31. f. 17.—*Steph. Catal.* 123. No. 1256.

Broader than the preceding, dusky-black, densely pubescent, variegated with whitish: head rounded, with a triangular impression in front: thorax unequal, the disc with two slightly elevated tubercles towards the centre, a central dorsal channel and two posterior foveæ: elytra faintly punctate-striate: body beneath uniform griseous-ash: legs piceous; tarsi and antennæ dull ferruginous.

Also a most abundant species, occurring throughout the vicinity of the metropolis, and in other parts of the country, in plenty. “Common among herbage (near Swansea).”—*L. W. Dillwyn, Esq.* “Warwick Moor, Cumb.”—*T. C. Heysham, Esq.* “Epping.”—

*Mr. Doubleday.* "Common at Bottisham and elsewhere."—*Rev. L. Jenyns.* "Newcastle and York."—*W. C. Hewitson, Esq.*

GENUS CCXXIII.—HYPNOIDUS, *Dillwyn.*

*Antennæ* short, naked, with the basal joint large, robust; the second and third, and sometimes the fourth, slender, obconic, of equal length; the remainder compressed, somewhat cordate, shorter than the foregoing; the terminal one obliquely truncate, or somewhat acuminate. *Head* small, porrect: *eyes* small: *thorax* broad, convex, transverse: *elytra* short, ovate, somewhat convex: *body* broad, ovate, subglabrous: *legs* slender; *tarsi* simple.

This genus embraces the smallest species of the family, and will doubtless ere long be formed into two, corresponding with the sections into which I have here thrown them: they may be known by their great comparative width and brevity, the dissimilarity in the structure of the antennæ, transverse thorax, &c.

A. Antennæ with the second, third, and fourth joints small.

Sp. 1. *riparius.* *Latus, fusco-æneus, nitidus, antennarum basi pedibusque rufotestaceis.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{4}$  lin.)

El. *riparius.* *Fabricius.*—N. G. *riparius.* *Steph. Catal.* 124. No. 1258.

Short, broad, above glossy æneous-brown: head punctured, with the front subfoveolated: thorax broader than long, the disc sparingly punctate and slightly pubescent, the hinder angles elongate, acute, concolorous: elytra short, ovate, with the apex slightly acuminate, regularly striated, the striæ impunctate, the interstices flat, scarcely punctured: body beneath pitchy-black, with the apex rather paler: legs rufescent: antennæ black, with the basal joints more or less testaceous.

Rare within the metropolitan district, but abundant in the mountainous districts of Wales; also in Norfolk. "Near Barmouth, in

‡Sp. 23. *fasciatus.* *Squamosus niger, thorace canaliculato albido variegato, elytris pallido adspersis, fasciæque posticâ undulatâ pallidâ.* (Long. corp. 6 lin.)

El. *fasciatus.* *Linné.*—*Turton (!).*—*Steph. Catal.* 123. No. 1257.

Black: thorax channelled, shagreened, and clothed with small silvery scales; elytra varied with white scales, with an undulated whitish fascia of silvery ones a little behind the middle.

Said by Turton to inhabit Britain, but erroneously.

1829, copiously.”—*Rev. F. W. Hope*. “Taken at the Mumbles (near Swansea), by Dr. Leach.”—*L. W. Dillwyn, Esq.*

Sp. 2. *rivularius*. *Niger, supra subæneus, antennis, pedibus, thoracis angulis posticis, elytrorumque margine rufo-ferrugineis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

El. *rivularius*. *Gyllenhal*.—N. G. *rivularis*. *Steph. Catal.* 124. No. 1259.

Black, slightly tinted with æneous above: head punctured, with a broad frontal depression: thorax somewhat quadrate, with the posterior angles acute, carinated, and rufo-ferruginous, the disc punctate and slightly pubescent: elytra oblong, acuminate at the apex, regularly and somewhat deeply striated, the striæ impunctate, with the interstices somewhat convex, and obscurely punctulate; the outer margin more or less ferruginous: body pitchy-black beneath, with the apex paler: legs and antennæ entirely rufo-testaceous.

Of this insect, the only examples I have seen were taken in Gloucestershire.

B. With the second and third joints of the antennæ alone smallest.

Sp. 3. *Agricola*. *Niger subpubescens, thorace non carinato, angulis posticis acutis rufis, maculis quatuor oblongis elytrorum pedibusque pallidis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

El. *Agricola*. *Zetterstedt, teste Gyllenhal, l. c.*—El. *quadrum*. *Gyllenhal, iv.* 357.

Black, slightly pubescent: head finely punctured: thorax short, with the sides much rounded, especially anteriorly, the disc very convex, without a dorsal carina, finely punctured, the posterior spines robust at the base, bent outwardly, acute and entirely rufo-testaceous: elytra oblong-ovate, not broader than the middle of the thorax, moderately convex and striated, the striæ obsoletely punctate, with the interstices faintly punctulated; each elytron with a large oblong pale humeral spot, and a second towards the apex longer and narrower: mouth, palpi, antennæ, and legs pale testaceous.

Differs chiefly from the following by having the thorax shorter, more convex, with the sides expanded anteriorly, the posterior angles pale, and the disc not carinated.

Near Bristol, by Mr. Millard, apparently in plenty. “Netley, Salop.”—*Rev. F. W. Hope*.

Sp. 4. *quadripustulatus*. *Niger subpubescens, thorace carinâ dorsali, elytris depressis tenuè striatis impunctatis, punctis duobus pedibusque pallidè flavescens.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

El. 4-pustulatus. *Fabricius*.—*Don, xvi. pl.* 545.—N. G. 4-pustulatus. *Steph. Catal.* 124. No. 1260.

Black, slightly pubescent: head very faintly punctulated: thorax somewhat glossy, the sides rounded and margined, dilated in the middle, with the posterior angles acute, prominent and concolorous; the disc convex, thickly and finely punctulate, with a slightly elevated smooth glabrous dorsal ridge: elytra ovate, with the apex obtusely rounded, slightly depressed and faintly striated, the striae smooth, and the interstices flat, scarcely punctulated; each elytron with a pale yellowish spot on the shoulder, and a smaller rounded one towards the apex: mouth and legs pale yellowish: antennae black, with the base testaceous.

Var.  $\beta$ . *Steph. Catal. l. c.* Var.  $\gamma$ .—With the elytra immaculate: the legs rufescent.

Occasionally found near London, and in Norfolk. “Devonshire, on the banks of rivers.”—*Dr. Leach*. “Epping.”—*Mr. Doubleday*. “Battersea-fields, July, 1820.”—*Mr. Ingpen*. “At times rather plentiful on the sand hills (near Swansea), particularly about Sketty Burrows.”—*L. W. Dillwyn, Esq.* Var.  $\beta$ . “Sidmouth, Devon.”—*T. Marshall, Esq.* “Dublin.”—*N. A. Vigors, Esq.*

Sp. 5. *Dermestoides*. *Niger subpubescens, thorace non carinato, angulis posticis concoloribus, elytris immaculatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

El. *Dermestoides*. *Herbst*.—N. G. 4-pustulatus  $\beta$ ?—*Steph. Catal.* 124. No. 1261.

Black, slightly pubescent; thorax short, finely punctured, with the posterior angles concolorous: the elytra immaculate, faintly striated, the striae impunctate, the interstices flat, scarcely punctured: antennae and legs pale testaceous.

Found in company with the preceding insect, but rarely.

Sp. 6. *pulchellus*. *Oblongus, niger, convexus, thorace elongato carinato, elytris flavo-maculatis, pedibus pallidis.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

El. *pulchellus*. *Linné*.—N. G. *pulchellus*. *Steph. Catal.* 124. No. 1261.

Oblong, black, convex: head thickly rugose-punctate: thorax elongate, the sides rounded, dilated in the middle, the posterior angles acute carinated; the disc very convex, thickly and finely rugulose longitudinally, with an abbreviated glabrous smooth, dorsal ridge: elytra rather convex, deeply punctate-striated, the interstices somewhat carinated, and granulated; the disc more or less spotted with pale-yellowish, and sometimes nearly immaculate: legs and apex of the body pale-testaceous; antennae ferruginous, with the tips dusky.

Rare: taken in Devonshire and Wales. “Capel Cerig.”—*M. Eyton, Esq.*



GENUS CCXXIV.—PERIMECUS, *Dillwyn*.

*Antennæ* rather long, pilose; the basal joint slightly bent and thickened, and subclavate; the second and third very small, nodose; the remainder compressed, obtusely serrated, the terminal joint being longest and obtuse. *Mouth* porrect: *head* rounded; *forehead* depressed: *eyes* small: *thorax* narrowed anteriorly, moderately convex, with the posterior angles rather prominent, acute, carinated: *elytra* very long, gradually attenuated from the base to the apex, slightly convex: *femora* small, compressed; *tibiæ* short, simple; *tarsi* with entire joints.

Perimecus is to be distinguished from Elater by having the second and third joints of the antennæ short, and the terminal one elongate and slender; the elytra also are very long, and the body is considerably attenuated posteriorly.

Sp. 1. *fulvipes*. *Nigro-piceus, pubescens, antennis fusco-testaceis, pedibus ferrugineis, elytris tenuè striato-punctatis*. (Long. corp. 6—10 lin.)

El. *fulvipes*. *Herbst*.—N. G. *fulvipes*. *Steph. Catal.* 124. No. 1262.

Pitchy-black, pubescent, punctate; the punctures on the head and thorax largest: elytra regularly but somewhat faintly striate, the striæ composed of distinct impressions, the interstices very sparingly punctured: body beneath rufo-piceous: legs ferruginous: antennæ fuscous.

Extremely variable in size and slightly so in colour, the latter probably resulting from the more or less mature state of the insect:—one of my gigantic specimens of the female has the thorax very rugose, punctate, and somewhat obscure.

Found in rotten wood, and beneath the bark of decayed trees, in woods and hedges, and rather abundantly within the metropolitan district; also near Edinburgh. “Black-Hall Wood.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday*. “Very common at Bottisham; the larvæ destructive to trees.”—*Rev. L. Jenyns*. “Near York.”—*W. C. Hewitson, Esq.* “Among grass in woods, and sometimes buried in the timber of decaying oaks (near Swansea).”—*L. W. Dillwyn, Esq.*

GENUS CCXXV.—LUDIUS, *Latreille*.

*Antennæ* rather long, acutely serrated, compressed, the basal joint somewhat robust; the second and third very small, subglobose; the fourth to the tenth subtrigonal, the inner angle considerably produced, gradually dimi-

nishing in length, the fourth being the longest; the eleventh abruptly acuminate, giving the appearance of a twelfth joint. *Palpi* short, comparatively slender: *head* small, deeply inserted in the *thorax*, which is narrowed in front, with the sides rounded; the posterior angles, which are robust, elongated, carinated, and acute; the disc very convex: *eyes* small: *body* convex, attenuated behind: *legs* moderate; *tarsi* simple.

*Ludius* is distinguished by the remarkable peculiarity of the terminal joint of the antennæ, which is so abruptly acuminate as to give the appearance of a twelfth joint; the second and third joints are very small, and the remainder, with the exception of the basal one, very acutely serrated.

Sp. 1. ferrugineus. *Suprà ferrugineus, subtùs niger, thoracis margine postico nigro, elytris obsolete striatis.* (Long. corp. 9—11 lin.)

El. ferrugineus. *Linné.*—*Don.* x. pl. 356. f. 1.—*Lu. ferrugineus.* *Steph. Catal.* 124. No. 1263.

Head black, thickly punctulate: thorax very thickly punctured, rufo-ferruginous, with the posterior margin and angles black, the disc sparingly covered with short flavescent hairs; scutellum black: elytra rufo-ferruginous, rather obsoletely striated, the interstices very thickly and somewhat finely punctate: body beneath black: antennæ and legs pitchy-black; the tip of the tarsi smooth and pale obscure rufescent.

† Var.  $\beta$ . With the thorax entirely of a deep fuscous-black.

This gigantic species is extremely rare in Britain; it has however been occasionally captured within the metropolitan district. “Windsor and Darent-wood.”—*Dr. Leach.* “Clengre, Gloucestershire.”—*Rev. F. W. Hope.* “Has once occurred at Bot-tisham, in a decayed walnut tree.”—*Rev. L. Jenyns.* “Taken in a willow (near Swansea).”—*L. W. Dillwyn, Esq.*

#### GENUS CCXXVI.—CTENICERUS, *Latreille.*

*Antennæ* moderate, the basal joint slightly bent, robust, subclavate; the second minute, subglobose; the remainder to the tenth more or less obconic, the inner edge being considerably produced and acute, forming a serrated edge, the apical joint elongate, acuminate; in some males the antennæ are considerably elongated; and the third to the tenth joints are furnished within, each with a long subclavate appendage. *Palpi* somewhat elongate: *eyes* not prominent: *head* small, deeply inserted in the *thorax*, which is rather elongate, depressed, broadest behind, with acute posterior spines: *body* elongate, slightly convex, usually adorned with rich metallic colours; attenuated behind: *legs* slender; *tarsi* simple.

This genus, termed *Cleniocerus* by Dr. Leach, in allusion to the conspicuous antennæ of some of the males, may be readily known from all the preceding ones in the family, by having the second joint of the antennæ alone minute and nodose, the third being nearly as long and of similar form with the fourth; the terminal one elongate; the thorax considerably longer than broad, a little depressed, the body usually adorned with rich metallic hues, and the antennæ more deeply serrated; by several of which characters it may also be distinguished from the following genera.

A. With the antennæ pectinated in the males; serrated in the females.

†Sp. 1. *aulicus*. *Obscurè viridi-æneus, elytris testaceis immaculatis.* (Long. corp. 7—8 lin.)

El. *aulicus*. *Panzer.*—Cl. *aulicus*. *Steph. Catal.* 124. No. 1264.

Head and thorax obscure brassy-green, the former depressed and punctulated, the latter slightly pubescent: scutellum concolorous with the elytra, which are pale immaculate-testaceous, striate-punctate, with a slight impression on each side at the base: legs and body beneath dull blackish-brass: antennæ black.

In the British Museum is a pair of this insect, said to have been taken by Dr. Leach in Devonshire, about four years since; but doubts have recently been started by Mr. Curtis, with his wonted caprice, as to its indigenous origin; and also of several other species reported to have been captured about the same period, some being admitted and others doubted.

Sp. 2. *pectinicornis*. *Elongatus viridi-æneus nitidus, thorace sulcato, elytris punctato-striatis.* (Long. corp. 7—8 lin.)

El. *pectinicornis*. *Linné.—Don. x. pl. 356. f. 2.*—Cl. *pectinicornis*. *Steph. Catal.* 124. No. 1265.

Above of a rich shining brassy-green: head rather obscure, punctate: thorax with a dorsal channel, the posterior angles stout, elongate, carinated above: scutellum fuscous: elytra rich green, tinted with æneous, rather deeply punctate-striate, the interstices finely punctured and slightly pubescent: body beneath more obscure, pubescent: legs and antennæ black, the latter in the male elongate, deeply pectinated; in the female short, serrated.

Found chiefly I believe in hilly and mountainous districts; abundant on the Malvern Hills, and in many parts of the north of England. “North Wales.”—*Rev. F. W. Hope*. “Near York and Newcastle; also near Wastwater, Cumberland: females rare.”

—*W. C. Hewitson, Esq.* “Marton-Lodge, in plenty.”—*Rev. G. T. Rudd.* “Bewdley-Forest.”—*W. Raddon, Esq.*

Sp. 3. cupreus. *Elongatus, subtus nigro-æneus, supra rufo-purpureo- aut viridicupreus, elytrorum basi sæpè flavâ, his tenuè striatis, thorace profundè canaliculato.* (Long. corp. 5—7½ lin.)

El. cupreus. *Fabricius.*—*Don. xv. pl. 508.*—Cl. cupreus. *Steph. Catal. 125. No. 1266.*—Var. El. chalybeus. *Sowerby, i. pl. 72.*

Beneath black-brass or cupreous, above various tints of red-purple or green-copper, or dusky; thorax elongate, thickly and rather coarsely punctate, with the posterior angles elongate, carinate: elytra rather faintly striate, the interstices obscurely punctured, the base more or less yellow or ochreous, but frequently concolorous with the apex: antennæ and legs black, the latter slightly æneous.

Scarcely two examples of this protean species occur precisely alike in the colour of the upper surface, which in different individuals partakes of nearly every colour of the rainbow; a great proportion have the base of the elytra flavescens, in some instances the colour occupying two-thirds of the surface, while in others it gradually vanishes, till at length the entire disc is concolorous with the apex; every possible shade and proportion occurs, so that it becomes impossible to discriminate the varieties.

Inhabits similar places with the former; females generally rare; at least fifty males to one female having usually occurred; but in August, 1829, out of scores of specimens now under my inspection, captured by the Rev. F. W. Hope and C. Darwin, Esq., in North Wales, scarcely a single male was observed. “Holme-Hill.”—*T. C. Heysham, Esq.* “Moushold-Heath, Norwich.”—*W. C. Hewitson, Esq.* “Cheltenham, and Allesley.”—*Rev. W. T. Bree.* “In profusion near Marton-Lodge.”—*Rev. G. T. Rudd.*

‡ Sp. 4. castaneus. *Niger, thorace pube fulvescente mutabili tecto, elytris flavis apice summo nigris.* (Long. corp. 5 lin.)

El. castaneus. *Linné.*—Cl. castaneus. *Steph. Catal. 125. No. 1267.*

Body beneath, head, antennæ, and legs black: thorax also black, thickly clothed with a short fulvescent down: scutellum black: elytra testaceous-yellow, with the apex black, the disc striated, the interstices punctured.

I believe that hitherto a single elytron only of this insect has been found in Britain, and that was picked up by the late W. Hooker, Esq. on Moushold-heath, near Norwich.

B. With the antennæ serrated in the males, simple in the females.

Sp. 5. sanguinicolis. *Niger pubescens, thorace toto sanguineo.* (Long. corp. 4 lin.)

*El. sanguinicolis.* *Hellwig*.—*Cl. sanguinicolis.* *Steph. Catal.* 125. No. 1268.

*El. ruficollis.* *Don.* xv. pl. 618. f. 1.

Black: head and thorax very pubescent; the latter attenuated in front, slightly depressed, and entirely of an immaculate blood-red; elytra bluish-black, rather faintly striated, the interstices punctured, somewhat pubescent, the margin ciliated; legs black; tip of the last joint of the tarsi rufous: antennæ serrated, black.

Very rare: occasional captures of the insect have been made within the metropolitan district; it also occurs in Norfolk. "Hydepark, by Mr. B. Clark; and Windsor, by W. Griesbach, Esq."—*Dr. Leach*. "Copenhagen-fields."—*Mr. Bainbridge*.

Sp. 6. *tessellatus.* *Cupreo-æneus pubescens, thorace elytrisque maculis griseo-villosis tessellatis, unguibus rufis.* (Long. corp. 5—7½ lin.)

*El. tessellatus.* *Linné*.—*Cl. tessellatus.* *Steph. Catal.* 125. No. 1269.

Dusky or coppery-brass, pubescent: thorax and elytra clothed with short depressed cinereous hairs disposed in tessellated patches, most distinct on the elytra, but of variable form, sometimes being equally distributed over the surface, and at others occupying the alternate interstices only between the striae on the elytra: legs concolorous with the body, with the claws rufous: antennæ black.

Found in marshy pastures and meadows, but local near the metropolis; the only locality that I am aware of being in a field near the "Red House," Battersea-fields, where it is sometimes found in plenty; it occurs in Norfolk. "Epping."—*Mr. Doubleday*. "Common in Bottisham and Horningsea Fens."—*Rev. L. Jenyns*. "In moist meadows, common, particularly about Penllergare and Sketty, and Mr. Jeffreys has found it under rubbish, near high-water mark."—*L. W. Dillwyn, Esq.*

Sp. 7. *metallicus.* *Oblongus, fusco-æneus, pubescens, thorace convexo lævi, antennarum basi pedibusque testaceis.* (Long. corp. 4—5 lin.)

*El. metallicus.* *Paykul*.—*Cl. metallicus.* *Steph. Catal.* 125. No. 1270.

Oblong, brassy-fuscout, pubescent: forehead rugose-punctate: thorax convex, the sides rounded, with elongate, acuminate, posterior angles: the disc delicately punctured: elytra a little attenuated towards the apex, which is acuminate; the disc faintly punctate-striate, and rather glossy: body beneath brassy-black, shining: legs pale testaceous; tarsi fuscous: antennæ with the basal joint ferruginous, the rest black.

This species ill associates with the rest of the genus; amongst other characters it has the basal joint of the antennæ large and bent, and the sides of the thorax dilated: in form it closely resembles the insects of the following genus, but its surface is pubescent, and not glabrous, as in them.

Rare near London; I have, however, frequently taken specimens in Walsam-meadows, near Ripley; it seems to occur in greater plenty in Somersetshire. "Among herbage (near Swansea), not common."—*L. W. Dillwyn, Esq.*

GENUS CCXXVII.—SELATOSOMUS\* *mili*.

*Antennæ* rather short, simple; the basal joint rather stout, elongate; second very short, subglobose; third elongate; the remainder short, obconic; the fourth and terminal joints being longest and about of equal length, the latter with the apex conical. *Palpi* rather elongate; *maxillæ* porrect: *head* small: *thorax* broad, subquadrate-elongate, margined; the lateral margins rounded, the posterior angles carinated, the disc gibbous: *body* broad, nearly glabrous, richly adorned; slightly convex: *elytra* a little dilated behind the middle; the apex attenuated: *legs* rather slender; *tarsi* simple, not very slender; basal joint moderate.

The typical species of this genus are eminently distinguished by the splendour and brilliancy of their colouring, the surface glabrous and richly adorned with lively metallic hues; from the preceding genus they differ in having the antennæ short, simple in both sexes, the body broad, thorax gibbous and expanded anteriorly; and from *Caloderus* they may be known by the same characters, united to the margined thorax, with its carinated posterior angles, rich colouring, &c.

Sp. 1. *æneus*. *Æneus, nitidus, glaber, suprà viridi- aut cærulescenti-æneus, aut purpureus, antennis nigris, pedibus nigro-fuscis aut rufis.* (Long. corp. 7—9 lin.)

El. *æneus*. *Linné*.—N. G. *æneus*. *Steph. Catal.* 125. No. 1271.—El. *impressus*. *Don*. xv. pl. 535. f. 2.—Var. El. *cyaneus*. *Sowerby*, i. pl. 26.

A most variable species, both in size and colour, the latter partaking of almost every conceivable hue: body above of various hues of *æneous*, green, blue, violet, or purple, the elytra being sometimes concolorous, at others dissimilar: head and thorax finely punctured, the latter with an obsolete dorsal channel and two rounded foveolæ: elytra rather deeply striated, especially at the base; the interstices faintly punctulate: body green or bluish-brass beneath: legs pitchy-black or dusky; sometimes bright-red, with fuscous tarsi: antennæ dusky or black:—the male is usually smaller than the female.

Found in various parts of the country, but very rare near the metropolis; it occurs in plenty in the county of Norfolk, also in

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\* Σελας, fulgor; σωμα, corpus.

several of the midland districts. "A pair taken from under a stone near Birch-wood."—*Mr. Weatherhead*. "In plenty in North Wales, in Aug., 1829."—*Rev. F. W. Hope*. "Near Fakenham, in Norfolk."—*Rev. T. Skrimshire*. "Arthur's Seat."—*Dr. Leach*.

‡ Sp. 2. *cruciatus*. *Thorace nigro, vittis duabus rubris, elytris flavescentibus cruce communi lineolâque humerali nigris*. (Long. corp. 7 lin.)

El. *cruciatus*. *Linné*.—*N. G. cruciatus*. *Steph. Catal.* 125. No. 1272.

Head and thorax black, the latter with a longitudinal red line on each side: elytra striated, flavescens, with the suture, a transverse fascia a little beyond the middle, and the outer edge of the elytra from the transverse fascia to the apex black: body beneath black, with the edges of the abdomen rufous: legs pale rufous, with the tips of the femora black.

Rare: but taken by the late W. Griesbach, Esq. near Windsor, of whose capturing four or five examples are in the British Museum.

† Sp. 3. *bimaculatus*. *Niger, elytris testaceis, apice nigris, puncto albo*. (Long. corp.  $3\frac{1}{2}$  lin.)

El. *bimaculatus*. *Fabricius*.—*N. G. bimaculatus*. *Steph. Catal.* 125. No. 1273.

Body beneath, head, antennæ, and thorax shining black: elytra striated, rufous from the base nearly to the middle, then black to the apex, with a white spot on each within the tip; towards the middle of the elytra is a black dentate patch, united to the black margin: legs flavescens, with black femora.

This species may possibly not belong to the present genus.

There are specimens of this insect in the collection at the British Museum, said to have been taken by Dr. Leach, about five years since, in Devonshire.

## GENUS CCXXVIII.—CALODERUS \* *mili*.

*Antennæ* rather approximating at the base, short, simple in both sexes; the basal joint short, robust; second very short, subclavate; third as long as the fourth, both obconic; the remainder, except the terminal one, shorter, also obconic; terminal one slender, ovate-acute. *Palpi* short: *mouth* porrect: *head* small, rounded, deeply inserted in the *thorax*, which is very gibbous, rounded laterally, immarginate; the hinder angles short, not carinated: *body*

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\* Καλός; pulcher; δίσκος, collum.

rather elongate, slender, more or less pubescent, slightly depressed, usually of sombre hue: *legs* short; *tarsi* very slender, simple, basal joint moderate.

The approximating simple antennæ of the insects contained in this genus, combined with the slenderness of the body, immarginate, very gibbous, thorax, and usually sombre colouring, distinguish them from those of the two preceding genus, as do the slender tarsi from *Anathrotus*.

Sp. 1. *thoracicus*. *Niger, glaber, thorace toto rufo*. (Long. corp. 4 lin.)

El. *thoracicus*. *Fabricius*.—*Martyn, C. pl. 31. f. 32*.—N. G. *thoracicus*. *Steph. Catal. 125. No. 1274*.

Body, head, antennæ, and legs black: thorax above globose, bright immaculate, red, beneath red, with a longitudinal black streak in the middle: elytra deep-black, striated: claws rufous.

Known from the other species, which have the thorax rufous, by the superior gibbosity of the latter, the elongate third joint of the antennæ, which last are simple in both sexes and approximating, and by its glabrous body.

Rare: but widely distributed, occurring within the metropolitan district, in Norfolk, Somersetshire, &c. “*Baron-wood, Cumb.*”—*T. C. Heysham, Esq.* “*Windsor.*”—*Dr. Leach.* “*New Forest.*”—*L. Rudd, Esq.* “*Collingbourne-wood.*”—*Rev. G. T. Rudd.*

Sp. 2. *ruficollis*. *Niger, glaber, thorace lævi rubro, anticè nigro, elytris sub-cæruleis, striatis*. (Long. corp.  $2\frac{3}{4}$ —3 lin.)

El. *ruficollis*. *Linné*.—*Martyn, pl. 30. f. 3*.—N. G. *ruficollis*. *Steph. Catal. 125. No. 1275*.

Shining black; the thorax above smooth, rufous, with the anterior portion black, beneath also rufous, with the anterior edge, and a longitudinal streak, black: elytra bluish-black, rather depressed, deeply striated, with the interstices granulated: tarsi slightly rufescent.

The anterior broad black margin to the thorax at once distinguishes this pretty species from the preceding.

Very few examples of this very rare species have hitherto been captured in Britain: one of my examples was taken in the neighbourhood of London; the insect has also been found on the oak, in Norfolk.

Sp. 3. *Equiseti*. *Niger, cinereo-pubescent, thorace lævi, pedibus piccis, geniculis tarsisque subtestaceis*. (Long. corp.  $3\frac{1}{2}$ —5 lin.)

El. *Equiseti*. *Herbst*.—N. G. *Equiseti*. *Steph. Catal. 126. No. 1276*.

Black: thickly clothed with a cinereous pubescence; thorax very convex, with an obscure dorsal channel; the hinder angles short: elytra depressed, a little



broadier than the base of the thorax, punctate-striate: legs pitchy-black, with the base of the femora, the joints, and the tarsi more or less testaceous: antennæ black.

Female;—N. G. cordiger. *Steph. Catal.* 126. No. 1277: rather larger and broader, with the antennæ shorter.

Not common within the metropolitan district; the only locality where I ever met with it being in a lane leading from Birch to Darenth-woods: it is found in Somersetshire, in Suffolk, and near Edinburgh. "Among herbage on Crwmlyn-burrows, not common."  
—*L. W. Dillwyn, Esq.* "Kew."—*Rev. T. T. Haverfield.*

### GENUS CCXXIX.—APLOTARSUS\* *miki*.

*Antennæ* moderate, slightly serrated, naked; the basal joint slightly incrassated; the second short, subglobose; third rather longer, and more slender, than the fourth, which, with the six following, is obconic; the terminal one elongate lanceolate-ovate. *Palpi* filiform, with the terminal joint ovate-subtruncate: *mouth* porrect: *head* transverse; *forehead* with the anterior margin reflexed: *thorax* elongate, narrowed anteriorly, the sides margined, disc slightly convex; posterior angles carinated, slightly prominent: *body* slightly pilose: *elytra* sublinear, a little convex: *legs* slender; *tarsi* gracile; the four basal joints simple, gradually diminishing in length, the fourth being shortest; *claws* simple, very slender.

From *Caloderus* the present genus may be distinguished by having the third joint of the antennæ elongated, the palpi nearly filiform, the thorax elongate, very slightly convex; and from the two following by having the tarsi slender and the fourth joint not minute.

Sp. 1. testaceous. *Niger, elytris striatis pedibusque testaceis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

El. testaceous. *Fabricius.*—N. G. testaceous. *Steph. Catal.* 127. No. 1289.

Elongate: head and thorax immaculate, slightly shining, black; the posterior angles of the latter very acute: *elytra* finely striated, the interstices thickly but finely punctulate, testaceous, immaculate: legs entirely pale-testaceous: antennæ dusky, with the basal joints slightly testaceous; mouth piceous.

I possess one example of this rare insect from Mr. Hall's collection, and a pair from the vicinity of Bristol: it occurs also near Edinburgh.

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\* *Απλῶες*, simplex; *ταρσοί*, palmula pedis.

Sp. 2. ochropterus. *Niger, subnitidus, elytris striatis subtestaceis, pedibus nigro-piceis.* (Long. corp. 4 lin.)

N. G. ochropterus. *Steph. Catal.* 127. No. 1290.

Head and thorax black immaculate, the posterior angles of the latter acute: elytra striated, the interstices obsoletely punctured, pale testaceous: body beneath black: legs pitchy-black, with the tibiæ sometimes paler, or somewhat testaceous: antennæ black.

Known from the preceding, which it greatly resembles, by its dusky legs and larger size.

I have three specimens, which were found in South Wales.

Sp. 3. rufipes. *Oblongus, niger, nitidus, thorace lævissimo immarginato mediotiori, elytris depressis punctato-striatis, pedibus rufis.* (Long. corp.  $3\frac{1}{2}$ —4 lin.)

El. rufipes. *Fabricius.*—N. G. rufipes. *Steph. Catal.* 127. No. 1291.

Oblong glossy-black, slightly pubescent; thorax shining, immarginate, broadest in the middle, subpunctate: elytra scarcely broader than the thorax, with the apex rounded, above a little depressed, punctate-striate, with the interstices very obsoletely punctate: legs dull rufous, with the tarsi fuscicent.

Rare; especially near London: it is also found in the west of England. "Woodland, Devon."—*Dr. Leach.*

Sp. 4. Quercus. *Oblongus-niger, elytris fusco-virentibus, thorace elongato postice lævi, fronte profundè punctato, pedibus fusco-testaceis, tibiis pallidis.* (Long. corp.  $3-3\frac{1}{2}$  lin.)

El. Quercus. *Olivier, ii. 31. pl. 6. f. 60.*—El. pallipes. *Paykul, F. iii. 14.*—N. G. tibialis. *Steph. Catal.* 127. No. 1292.

Oblong-black: forehead deeply rugose-punctate, slightly foveolate: thorax elongate, finely punctured anteriorly, smooth posteriorly: elytra slightly acuminate, moderately convex, of an opaque greenish fuscous, clothed with a fine cinereous down, obsoletely striated, the interstices finely granulated; the inflexed margin obscurely rufescent: legs fusco-testaceous, with the tibiæ pale: antennæ black, with the basal joint piceous.

The elongate thorax, dark legs, with pale tibiæ, distinguish this from the preceding insect.

Found occasionally in woods near London; the only localities I know being those of Darenth and Birch-wood.

#### GENUS CCXXX.—CTENONYCHUS\* *mih.*

*Antennæ* short? simple, pilose; the basal joint elongate, slightly robust; second

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\* Κτυς, pecten; οὐχ, unguis.

rather slender, subcylindric; third and following subclavate, scarcely compressed. *Mouth* deflexed: *palpi* very short: *head* broad, angulated anteriorly: *thorax* oblong, the sides margined, rounded towards the middle, the hinder angles produced into a short prominent spine; the disc slightly globose anteriorly: *elytra* elongate, slightly attenuated: *body* clothed above with long hairs, beneath with a dense pile: *legs* moderate: *femora* and *tibiæ* compressed: *tarsi* with the three basal joints considerably dilated, the third being produced beneath into a bilobed spongy process; the fourth joint extremely minute: *claws* short, each furnished with four elongate horny spines at the base within.

The pectinated claws of the only species of this genus well distinguish it from the other genera of this family, from which it also differs in having the antennæ not compressed, and composed of somewhat cylindric, subclavate joints, the body remarkably pilose, the third joint of the *tarsi* with an elongate bilobed spongy process, the two basal joints also dilated, and the fourth extremely minute; but in these last characters it somewhat resembles the following genus.

Sp. 1. *hirsutus*. *Nigro-fuscus, flavescenti-cinereo-villosus, elytris elongatis, striatis*. (Long. corp. 5 lin.)

N. G. *hirsutus*. *Steph. Catal.* 126. No. 1283.—*El. pilosus*. *Fabricius, Eleut.* ii. 241.?  
N. G. *cylindrus*. *Steph. Catal.* 126. No. 1278?

Above fuscous-black, densely clothed with rather long flavescent-ash coloured hairs, especially on the head and thorax; the latter rather elongate, the anterior margin slightly fulvescent, with the angles deflexed, the disc convex anteriorly, with the posterior angles somewhat elongate and acute; the disc thickly punctulated, and with a dorsal channel behind: *elytra* elongate, densely clothed with short down as on the head, punctate-striate, the punctures minute: *legs* slightly piceous; *body* beneath black, densely covered with a short silvery down; antennæ testaceous.

Not found near London; my specimen, which is greatly injured, I obtained from Bristol: and in the collection at the British Museum, I believe, there are others from the same quarter.

### GENUS CCXXXI.—ANATHROTUS, *Dillwyn*.

*Antennæ* rather long, compressed, deeply serrated, the basal joint generally robust, elongate, curved; the second short, subglobose, or somewhat elongate, subclavate; the third and following elongate obconic; the terminal one longest and attenuated at the apex. *Palpi* short, slender: *head* broad, angulated anteriorly: *thorax* elongate, narrowed in front, the hinder angles acute,

prominent, the disc slightly convex: *elytra* very long: *body* sublinear, pubescent: *legs* rather slender: *tarsi* with the three basal joints, with a spongy process beneath, obscurely bilobed; the fourth joint minute, simple; terminal joint and *claws* slender, the latter simple.

There is considerable diversity between the insects comprised in this genus; but without a more rigid investigation of them than I have the opportunity of devoting to their examination, I must content myself with pointing out some of the more important external distinctions; which characters have chiefly guided me in the distribution of the Elateridæ:—the first section of this genus may be distinguished by having the antennæ rather long, the second joint manifestly abbreviated, and more or less subglobose; and the third elongate, subclavate; while in the second section the antennæ have the second joint somewhat lengthened, and in some instances scarcely shorter than the third: the body in both sections is somewhat linear, subconvex; and the tarsi have the fourth joint extremely minute, and the three basal ones considerably dilated, and in some species obscurely bilobed.

A. With the second joint of the antennæ more or less subglobose.

Sp. 1. pubescens. *Rufo-testaceus, cinereo-tomentosus: oculis nigris.* (Long. corp. 8—9 lin.)

El. pubescens. *Marsham MSS.*—N. G. pubescens. *Steph. Catal.* 126. No. 1279.

Body entirely of a pale rufo-testaceous hue, and slightly clothed with a cinereous pubescence: forehead deeply impressed between the antennæ, which latter are rather longer than the thorax, and serrated; thorax slightly convex, finely punctate, glossy: *elytra* punctate-striate, with the interstices finely punctured, pubescence as if obliquely abraded a little behind the middle, forming by the union of the *elytra* an obscure letter V.: legs black.

This species, which might, without due attention to the structure of its antennæ, readily pass for an immature state of *Perimecus fulvipes*, was discovered many years since in “Lee-wood, by Mr. Millard.”—*Marsham MSS.* It was afterwards taken by Mr. Bydder, in the New Forest, and again near Lyndhurst, by Mr. Weaver, who captured eight or ten specimens in the summer of 1826.

Sp. 2. niger. *Niger nitidus fusco-hirtus, elytris leviter striatis, basi sulcatis.* (Long. corp.  $4\frac{1}{2}$ —6 lin.)

El. niger. *Linneé.*—N. G. niger. *Steph. Catal.* 126. No. 1280.

Shining black, clothed with a fuscous down: thorax very glossy, obsoletely punctate: elytra faintly punctate-striated, the striæ deeply impressed at the base, the interstices finely punctured: legs black, with the tarsi somewhat piceous. Generally smaller and more glossy than the following species, and clothed with a fuscous pubescence.

A very abundant species in hedges and by the sides of woods, throughout the metropolitan district, and not uncommon in other parts of the country. "Epping."—*Mr. Doubleday*. "Greenwich Park."—*Mr. Inghen*. "Bottisham, common."—*Rev. L. Jenyns*.

Sp. 3. *nigrinus*. *Niger, nitidus, cinereo-hirtus, thorace punctato, elytris striatis*. (Long. corp. 6 lin.)

El. *nigrinus*. *Marshall*.—N. G. *nigrinus*. *Steph. Catal.* 126. No. 1281.

Shining black, clothed with a cinereous down: thorax punctate: elytra striated, the striæ impunctate: antennæ serrated.

Larger and less shining than the foregoing, and clothed with a cinereous, instead of a fuscous pubescence:—whether it be more than a variety, with the pubescence bleached by age, I am unable satisfactorily to determine.

Found in similar places with the foregoing, and not uncommonly. "Among herbage (near Swansea), not uncommon."—*L. W. Dillwyn, Esq.*

‡ Sp. 4. *varius*. *Niger, thoracis margine, elytrorumque basi fasciâque posticâ villosa-flavescentibus*. (Long. corp.  $5\frac{1}{2}$  lin.)

El. *varius*. *Fabricius*.—N. G. *varius*. *Steph. Catal.* 126. No. 1282.

Black, slightly tinted with rufous: thorax canaliculate, with the sides densely clothed with short, erect, flavescent hairs: elytra black, somewhat granulated, with the base and a broad fascia at the apex clothed with flavescent down: body black: legs and antennæ dull ferruginous.

I have seen but one specimen, which was taken in "Windsor Forest."—*J. H. Griesbach, Esq.*

B. With the second joint of the antennæ somewhat obconic, sometimes not much shorter than the third.

Sp. 5. *hæmorrhoidalis*. *Nigro-fuscus, pubescens, thorace lineari elongato, elytris piceis, abdominis marginibus anoque rufo-ferrugineis*. (Long. corp. 6—8 lin.)

El. *hæmorrhoidalis*. *Fabricius*.—N. G. *ruficaudis*. *Steph. Catal.* 126. No. 1284. —El. *sputator*. *Don*. iii. pl. 96. f. 4.

Linear-elongate; fuscous-black, pubescent; thorax elongate, linear, the posterior angles short; the disc slightly convex, with a very obsolete channel, clothed with a depressed griseous pubescence; black, with the hinder angles sometimes slightly rufescent: elytra moderately punctate-striate, piceous or brunneous,

sometimes rufescent: body beneath fuscous, with the margins of the segments and the terminal one rufo-ferruginous: legs dusky-ferruginous, with the anterior femora piceous: antennæ piceous.

Variable:—in some examples the body beneath is nearly entirely of a bright rusty-red, and in others nearly fuscous, with the margins of the segments nearly concolorous.

A most abundant species throughout the metropolitan district, and in other parts. “Sandsfield.”—*T. C. Heysham, Esq.* “Bot-tisham, common.”—*Rev. L. Jenyns.* “Epping.”—*Mr. Doubleday.* “Common (near Swansea).”—*L. W. Dillwyn, Esq.* “Scarborough.”—*W. Bean, Esq.*

Sp. 6. elongatus. *Elongatus, posticè acuminatus, totus castaneus, elytris striatis.* (Long. corp. 6 lin.)

El. elongatus. *Marsham.*—N. G. elongatus. *Steph. Catal.* 126. No. 1285.

Elongate, attenuated behind; entirely castaneous or rusty-fuscous; thorax broadest anteriorly, convex, punctulated, excavated behind, with a dorsal channel and an oblique obscure impressed line on each side, the hinder angles rather elongate, acute: elytra striated, rather depressed, acute: body bright rufo-castaneous: eyes black.

In my Catalogue I supposed this might be a variety of *An. hæmorrhoidalis*; but its characters are evidently too dissimilar to support the assumption.

My specimen formed a portion of the Marshamian collection; I know not its locality.

Sp. 7. subfuscus. *Lineari-elongatus nigricans, pubescens, antennis, ore, thoracis limbo, elytris ano pedibusque ferrugineo-testaceis.* (Long. corp. 4—5 lin.)

El. subfuscus. *Gyllenhal.*—N. G. subfuscus. *Steph. Catal.* 126. No. 1286.

Linear-elongate; dusky, pubescent: head rufo-piceous: thorax sublinear, with the posterior angles short, obtuse; the disc pitchy-brown, shining, with all the angles, and generally the entire margin more or less broadly rufo-testaceous: elytra pale testaceous immaculate, nearly linear, the apex obtusely rounded; faintly punctate-striate; body pitchy-black, with the margin of the abdomen and the apex testaceous: legs and antennæ rufescent.

Somewhat rare near London, but apparently in great plenty in the New Forest: it has also, I believe, occurred in Norfolk.

Sp. 8. vittatus. *Fusco-piceus, pubescens, thorace lineari-elongato, antennarum basi, thoracis limbo, elytrorum vittâ latâ, ano pedibusque testaceis.* (Long. corp. 4—5 lin.)

El. vittatus. *Fabricius.*—*Don.* xv. pl. 518. f. 2.—N. G. vittatus. *Steph. Catal.* 126. No. 1287.

Pitchy-fuscous, pubescent: head black, with frequently an oblong testaceous spot on each side of the forehead: thorax with the anterior and lateral margins

and all the angles rufo-testaceous: elytra pale testaceous, with the suture and lateral margins more or less broadly fuscous-black, and sometimes nearly concolorous: body beneath pitchy-fuscous, with the margin and apex rufo-testaceous: legs pale testaceous: antennæ more or less testaceous at the base, the apex black.

Variable in the intensity of its colours, being sometimes of a fuscous-black.

Also somewhat uncommon within the metropolitan district, but abundant towards the west of England, especially in the New Forest, and in Somersetshire. "Found by Mr. Jeffreys lying dead in considerable numbers among rubbish left by the tide on the shore, at the confluence of the Neath river with the sea."—*L. W. Dillwyn, Esq.*

Sp. 9. *angularis*. *Oblongus, fusco-piceus, pubescens, thorace breviori, subconvexo, angulis posticis rufis, elytris fuscis, striatis, pedibus antennisque rufis.* (Long. corp. 5 lin.)

N.G. *angularis*. *Steph. Catal.* 127. No. 1288; *DELE El. erythrogonus. Müller?*

Oblong; pitchy-brown, slightly glossy and pubescent: thorax rather short, somewhat convex, with the posterior angles very short, rufous or rufo-testaceous; elytra rather deep fuscous, clothed with a griseous pubescence, punctate-striate, the interstices convex and finely punctulate: body beneath rufo-piceous: legs and antennæ rufous; the latter with the second and third joint somewhat elongate, slender.

This insect is evidently not the *El. erythrogonus* of Müller, that having the second and third joints of the antennæ short and nodose.

I have a pair of this distinct species, which were captured in Devonshire.

Sp. 10. *longicollis*. *Niger, punctatissimus, thorace angusto lineari-elongato, elytris testaceis, suturâ margineque nigris.* (Long. corp.  $4\frac{1}{2}$ — $5\frac{1}{4}$  lin.)

*El. longicollis. Fabricius.*—N. G. *longicollis. Steph. Catal.* 127. No. 1293.—

*El. marginatus. Martyn, pl.* 31. f. 15.

Head black, forehead deeply excavated: thorax elongate, with an abbreviated dorsal sulcus and two posterior foveolæ; black, with the lateral margins and posterior angles testaceous: scutellum black: elytra broader than the thorax, rather deeply punctate-striate, with the interstices convex, pale-testaceous, with the outer margins rather broadly dusky, and the suture more or less black: body fuscous, with the margins of the segments rufescent: legs testaceous, with the femora sometimes fuscous: antennæ black. Female with the thorax less elongate than in the male, slightly globose; the elytra rather broader, and the antennæ a little rufescent.

Var.  $\beta$ . Rufo-testaceous, with the eyes black.

Common at Darent and Coombe-woods, also throughout the

metropolitan district; in Devonshire, the New Forest, Norfolk, &c. "Southend."—*Rev. F. W. Hope*. "Rose Castle."—*T. C. Heysham, Esq.* "Bottisham, common."—*Rev. L. Jenyns*. Var.  $\beta$ . "Has been taken in the neighbourhood (of Swansea), but is far from common."—*L. W. Dillwyn, Esq.*

## GENUS CCXXXII.—*CAMPYLUS*, *Fischer*.

*Antennæ* rather long, slender, serrated; the basal joint moderately robust; the second abbreviated, subglobose; the third to the tenth nearly of equal length, obconic, elongate; the terminal one slender, longer than the preceding, acuminate. *Palpi* short: *head* exserted, subquadrate; the frontal margin elevated: *eyes* large, globose, prominent: *thorax* scarcely broader in front than the head; the sides a little dilated anteriorly, then contracted towards the hinder angles, which are stout, elevated, somewhat bent outwardly and acute: *body* linear, slightly pubescent: *elytra* elongate, rounded at the apex: *legs* elongate, slender; *tarsi* with simple joints; the fourth somewhat abbreviated.

The large projecting eyes of this genus, with the exserted head, prominent, elevated, acute posterior angles of the thorax, linear body, and elongate antennæ, well characterize it, and distinguish it from its allies: the only indigenous species is extremely variable in colour; it occurs upon trees.

Sp. 1. *linearis*. *Thorace cruce impressâ, elytris striato-punctatis: abdomine nigro margine anoque testaceis*. (Long. corp.  $5\frac{1}{2}$ —7 lin.)

El. *linearis*. *Linné*.—Ca. *dispar*. *Steph. Catal.* 127. No. 1294.

Body beneath black, with the margin and apex, and sometimes the breast, testaceous; above extremely variable in colour: head deeply punctured, black, with the mouth testaceous, or pale testaceous, with the eyes deep brunneous: thorax in both sexes punctate, with a deep dorsal channel, and a transverse impression a little behind the middle, the superficies bright testaceous-red, sometimes with a deep black discoidal spot, or the disc fuscous, with the hinder angles above pale testaceous: scutellum oblong, testaceous or black: elytra punctate-striate, linear, dilated, and rather convex in the female, slightly pubescent, pale testaceous, with the suture sometimes more or less fuscous, this latter colour occasionally predominating over the entire surface, especially in the females, leaving only the margin itself bright testaceous: legs testaceous, with the femora more or less fuscous: antennæ black, varied with testaceous at the base.

One of the most inconstant species of this most variable family. That the above variations, which, in fact, are mere shades of colour, the fovea and sculpture of



each sex not undergoing the slightest change, positively belong to one species, the fact of my having repeatedly taken the insects in copulā proves indisputably; a point I am here induced to notice from a difference of opinion prevailing amongst entomologists who have not had the opportunity of capturing the insects in plenty.

Extremely abundant in certain years in Coombe-wood, towards the end of June; I have also taken the insect in the hedges about Darenth and Birch woods, and occasionally at Ripley, Dover, and Hertford: it also occurs in Norfolk. "Baron-wood."—*T. C. Heysham, Esq.* "Woods near Cambridge."—*C. Darwin, Esq.* "Epping."—*Mr. Doubleday.* "Stockton-common, near York; and near Newcastle."—*W. C. Hewitson, Esq.* "In moist woods about Penllergare, and woody parts of Crwmlyn-bog."—*L. W. Dillwyn, Esq.* "Common near Kimpton."—*Rev. G. T. Rudd.*

## SUBSECTION IV.

*Antennæ* 11- rarely 10-jointed, mostly elongated, more or less serrated, or pectinated; occasionally with the three terminal joints more robust (sometimes considerably, and suddenly, elongated): or clavate, the club composed of compactly united articulations: *head* nutant, in some instances somewhat produced into a rostrum anteriorly, in general deeply inserted in the *thorax*, which is more or less semicircular or subquadrate, sometimes cylindric or subcordate: *body* soft and depressed, or of a firm consistence and more or less cylindric and elongate: *legs* rather long; *tarsi* five- or four-jointed, the penultimate joint frequently bilobed.

There is considerable diversity of appearance amongst the insects of this subdivision; nevertheless, although they seem to form a group sufficiently natural to allow of being associated together, it appears useful to divide them into the subjoined families, concisely distinguished by the following external characters:

Antennæ	{	filiformes vel setaceæ. <i>Tarsi</i> art <sup>o</sup> penultimo	{	bifido: <i>Palpi</i> <i>maxillares</i>	{	filiformes; <i>labiales</i>	{	haud bifurcati:	34. CEBRIONIDÆ.									
								furcati:	35. CYTHONIDÆ.									
								{	valdè approximati:	36. LAMPYRIDÆ.								
									haud approximati:	37. TELEPHORIDÆ.								
								{	remoti:	38. MELYRIDÆ.								
									approximati:	40. PTINIDÆ.								
								extrorsum	{	crassiores,	{	haud bifido: <i>Antennarum</i> basi	{	art-s 3-s ultimis subito longioribus:	{			39. TILLIDÆ.
								clavata; <i>clava</i> subsolida:										41. POSTRICHIDÆ.

FAMILY XXXIV.—CEBRIONIDÆ *mili*.

*Antennæ* inserted before the eyes, longer than the thorax, filiform, composed of cylindric articulations: *mandibles* corneous, bent, acute, slightly emarginate towards the tip: *palpi* filiform, the posterior shortest: *labium* emarginate; *body* elongate, rather firm; *head* rather small, inclined: *thorax* trapeziform: *legs* rather long; *tarsi* 5-jointed, the penultimate joint bilobed.

There is but one indigenous genus of this family, which may be thus known:

GENUS CCXXXIII.—*Atopa*\*, *Paykul*.

*Antennæ* with the first and second joints very short, and the third slightly elongate, and equal in length with the terminal one, which is obliquely truncate. *Palpi*, *maxillary* long, filiform: *labial* short, the terminal joint slightly incrassated, obovate: *mandibles* porrect, with a single tooth within: *maxilla* bilobed, the outer one bifid: *labium* divided into two bifid divaricating lobes: *head* moderate, deeply inserted in the *thorax*, which is transverse, with the posterior margin sinuated: *elytra* elongate-ovate, convex, as long as the abdomen: *legs* long and slender: *femora* compressed: *tarsi* with the three basal joints cordate, the fourth joint bilobed.

Of this genus a single species only is found in Britain: it may be known from the others of the group by its elongate, convex body, combined with long filiform antennæ and palpi, and the singular structure of the maxillæ and labium, the bifid portions of which are composed of elongate membranous pubescent lobes.

Sp. 1. *cervina*. *Oblongo-ovata, fusca, densè pallido-pubescent, ano unguisque subtestaceis*. (Long. corp.  $4\frac{1}{2}$ — $5\frac{1}{4}$  lin.)

Ch. *cervina*. *Linné*.—*At. cervina*. *Steph. Catal.* 128. No. 1295.—*Da. cervinus*. *Curtis*, v. pl. 216 ♂ and ♀.

Dusky, or black, clothed with a dense ochreous pubescence, minutely and thickly punctured, the punctures somewhat disposed in lines on the elytra and rather coarse. Female livid, with the elytra, legs, and antennæ dull testaceous.

Variable:—in some males the body beneath and thorax are black, and the elytra livid or dull testaceous, in others the legs are more or less testaceous:—the

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\* I have here followed Paykull's name, in preference to the one applied a short time previously by Latreille, as, although not strictly incorrect, it is manifestly absurd to apply the old name of a *fish* to a genus of insects.

females sometimes are entirely livid above, with the abdomen alone dusky, or have the head and thorax dusky, but the legs are always paler.

My experience proves incontestably that the sexes above described are legitimately united, for similar reasons to those mentioned under the last-described insect: (*Campylus linearis*.)

Extremely abundant in hedges in the vicinity of Darent and Birch woods, and not uncommon in Coombe and Beer woods near Dover: also occasionally about Hertford: I have usually found it attached to chalky districts. “North Wales, abundantly in July.” *Rev. F. W. Hope*. “Sandsfield.”—*T. C. Heysham, Esq.* “Froxtenden, Suffolk, and Marsden, near Newcastle.”—*W. C. Hewitson, Esq.* “In profusion on the Downs near Brighton, especially on thistles, in May, 1826.”—*S. Saunders, Esq.* “Scarborough.”—*W. Bean, Esq.*

#### FAMILY XXXV.—CYPHONIDÆ *miki*.

*Antennæ* filiform, simple, sometimes slightly serrated, with the second and third joints generally shortest: *mandibles* concealed beneath the *labrum*: the labial *palpi* bifurcate: *head* very small: *body* ovate, or hemispheric, rather soft: *elytra* flexible, as long as the abdomen: *thorax* very short, transverse, narrowed and rounded in front and on the sides: *legs* short: *femora* sometimes incrassated: *tarsi* five-jointed; the penultimate joint bifid.

The Cyphonidæ are insects of small size and plain colours: they differ from the Cebriionidæ by having the labial palpi bifurcate, the body ovate or rounded, soft, and not greatly convex: they are attached to damp and marshy situations amongst herbage; fly and run with rapidity.

Two genera only have hitherto been formed out of the indigenous species, distinguished by the magnitude of the hinder femora.

<i>Femora postica</i>	{	valdè incrassata:	.	.	.	.	234. SCIRTES.
		gracilia:	.	.	.	.	235. CYPHON.

#### GENUS CCXXXIV.—SCIRTES, *Illiger*.

*Antennæ* short, about half as long as the body, slender, filiform; the basal joint short, robust; the second and third very short, the former subglobose, the

latter smaller, subconic; the seven following of nearly equal length, oblong, cylindric; the terminal one rather longer, ovate: *head* deflexed, small: *thorax* very short, transverse, the anterior and posterior margins bisinuated, the angles rather acute, the lateral edges slightly margined: *body* hemispheric, slightly depressed: *legs* short; *femora* compressed, the posterior ones greatly incrassated; *tibiæ* armed at the apex with a stout, elongate, slightly bent spine.

Scirtes may be at once known from Cyphon by the incrassated posterior femora, and by the elongate spine at the apex of the tibiæ: the antennæ are shorter than in the latter genus, with the third joint proportionably longer, and not greatly dissimilar in bulk to the second.

Sp. 1. hemisphæricus. *Niger, pubescens, antennarum basi tibiisque pallidis.*  
(Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Ch. hemisphærica. *Linné.*—Sc. hemisphæricus. *Steph. Catal.* 128. No. 1296.

Black, pubescent; obsoletely punctulate, and slightly shining: elytra more distinctly punctate, the pubescence changeable: body beneath pitchy-black: femora also pitchy-black, with the apex testaceous; tibiæ and tarsi pale-testaceous: base of the antennæ pale, the apex black or fuscous.

Not uncommon in damp and marshy situations throughout the metropolitan district; on the banks of the Lea river I have frequently observed it. “Windsor.”—*Mr. G. Waterhouse.* “On aquatic plants, not common (near Swansea).”—*L. W. Dillwyn, Esq.* “Rushes, Battersea-fields.”—*Mr. Ingpen.* “Aquatic plants, Plaistow Marshes.”—*A. Cooper, Esq.*

Sp. 2. pallescens. *Testaceo-pallidus, pubescens, antennis pedibusque pallidis.*  
(Long. corp.  $1\frac{3}{4}$ —2 lin.)

Sc. pallescens. *Steph. Catal.* 128. No. 1297.

Pale-testaceous, pubescent; obscurely punctulate; with the antennæ and legs pale, the hinder femora with a black patch in the middle.

Larger than the foregoing species, from which it differs also in being more pubescent as well as in colour, which is not that of an immature insect.

Rare: I have hitherto seen but four or five examples. “Battersea-fields and Spitchweek Park.”—*Dr. Leach.*

## GENUS CCXXXV.—CYPHON, *Paykul.*

*Antennæ* elongate, above half the length of the body, slender, filiform; the basal joint stout, cylindric; second shorter, globose; third minute, nodose; the re-

mainder of nearly equal length, filiform; the fourth and last being rather the longest; or with the fourth to the tenth joints inclusive slightly pectinated or serrated. *Head* transverse, in general concealed beneath the anterior margin of the *thorax*, which latter is transverse, margined laterally, rounded in front and mostly sinuated behind: *body* ovate or oblong, sometimes rounded: *legs* short; *femora* compressed, slender: *tibiæ* with the apex unarmed, or furnished with a very minute spine.

The elongate antennæ, slender hinder femora, and unarmed tibiæ enable us with facility to discriminate the insects of this genus from *Scirtes*:—there is nevertheless considerable diversity amongst the species; and doubtless the time is not far distant when the first and the two last species will be separated into other genera: *Cy. chrysomeloides*, of which the male has slightly pectinated antennæ, is evidently more allied to this than to the preceding genus.

A. With the head concealed beneath the thorax.

a. *The body hemispheric: antennæ serrated.*

Sp. 1. *chrysomeloides*. *Ferrugineo-testaceus, pubescens, oculis nigris, elytris punctulatis.* (Long. corp.  $2\frac{1}{4}$  lin.)

*Cy. chrysomeloides.* *Wilkin MSS.—Steph. Catal.* 128. No. 1298.

Rufo- or ferruginous-testaceous, pubescent, eyes black: scutellum rather large, oblong, triangular: elytra large, very convex, thickly and rather coarsely punctured: body finely punctulated beneath: legs and antennæ pale-testaceous, the latter more or less serrated.

Apparently very rare: I once took a specimen many years since, in Coombe-wood, and subsequently obtained a second example from the same locality, and an original specimen from the Marshamian collection: these, with two others, are the only examples I have seen.

b. *The body oblong-ovate: antennæ simple.*

Sp. 2. *melanurus.* *Oblongo-ovatus, testaceus, pubescens, elytrorum apice abdomineque fuscis, antennis fuscis basi testaceis.* (Long. corp.  $2-2\frac{1}{2}$  lin.)

*Cy. melanurus.* *Fabricius.—Steph. Catal.* 128. No. 1299.

Oblong-ovate, testaceous, pubescent, shining; with the apex of the elytra and the abdomen fuscous; the antennæ fuscous, with the base testaceous: eyes black.

Variable in colour: sometimes entirely rufo-testaceous, with the eyes and tip of the antennæ alone black.

Occasionally met with in plenty in the neighbourhood of the

metropolis, frequenting hedges and flowers in the month of June. “Rose Castle.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.* “Southend.”—*Rev. F. W. Hope.* “On the flowers of *Cratægus Oxyacanthæ*, not common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 3. lætus. *Oblongo-ovatus, testaceus, vertice nigricanti, elytrorum suturâ apiceque latè nigro-fuscis.* (Long. corp.  $2\frac{1}{4}$  lin.)

Cist. læta. *Panzer.*—Cy. lætus. *Steph. Catal.* 128. No. 1300.

Oblong-ovate, testaceous, pubescent, with the vertex dusky or black: the elytra thickly punctured, with the suture and apex more or less broadly black, this colour sometimes occupying above half the surface: abdomen and pectus also black.

Supposed by Gyllenhal to be a variety of the foregoing; but I conceive it to be distinct from the circumstance of its not occurring in company therewith near London, though seemingly abundant in other places. Found in Devonshire, and near Edinburgh. “Swansea.”—*L. W. Dillwyn, Esq.* “Liverpool.”—*Mr. J. Hutchinson.*

Sp. 4. assimilis. *Ovatus, brevis, livido-testaceus, pubescens, oculis antennarumque apice nigro-fuscis, thorace subrotundato medio fusco.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Cy. assimilis. *Steph. Catal.* 129. No. 1301.

Ovate, short, of a livid testaceous or ochraceous, pubescent, with the eyes and apex of the antennæ fuscous-black, the thorax somewhat rounded, fuscous in the middle.

Shorter and proportionably broader than the following species, from which it also differs in being of a very pale livid testaceous hue, and in having the thorax longer and somewhat rounded.

Found in hedges within the metropolitan district, but rarely; more frequent in South Wales.

Sp. 5. lividus. *Ovalis, livido-testaceus, pubescens, oculis antennarumque apice nigro-fuscis, thorace breviori transversis.* (Long. corp.  $2$ — $2\frac{1}{4}$  lin.)

Cy. lividus. *Fabricius.*—*Steph. Catal.* 129. No. 1302.

Oval, livid-testaceous, pubescent; with the eyes and tip of the antennæ black-brown, the thorax very short, transverse, with the disc more or less fuscous. Longer than the foregoing, but not broader, thereby differing in form; its thorax is very short and transverse, colour deep livid, or rufescent testaceous, with the eyes and apex of the antennæ of a darker hue.

Extremely abundant in damp hedges throughout the metropolitan district, and, I believe, elsewhere, in June. “Rushes, Battersea-fields, very abundant.”—*Mr. Inghen.* “Epping.”—*Mr. Double-*

*daj.* “ Not uncommon in June, on the leaves of willows and alders (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 6. testaceus. *Ovalis, corpore antennarumque totò (oculis nigris exceptis) testaceis, subtus pallidior.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Cy. testaceus. *Steph. Catal.* 129. No. 1303.

Oval, with the body above and below entirely of a pale-testaceous hue, immaculate: the eyes alone black; the under surface paler than the upper.

Rather less than the foregoing, which it somewhat resembles in form, but differs in colour; and the thorax appears somewhat longer.

Taken near London and in Somersetshire; also, I believe, in Devonshire.

Sp. 7. obscurus. *Suboblongo-ovalis, testaceus, subpubescens, oculis nigris, thorace medio fuscescenti, elytris fusco-nigris.* (Long. corp.  $2\frac{1}{2}$  lin.)

Cy. obscurus. *Steph. Catal.* 129. No. 1304.

Somewhat elongate-ovate, testaceous, slightly pubescent: head fuscescent, eyes black: thorax with the anterior margin nearly straight; the disc slightly clouded with fuscous; elytra fuscous-black, rather coarsely and transversely rugose; legs and three basal joints of antennæ testaceous, the rest of the antennæ black.

As long, and of the same form with the foregoing, but differs in having the head and the disc of the elytra dusky-black, and the anterior margin of the thorax nearly straight.

A single specimen caught within the metropolitan district.

Sp. 8. marginatus. *Ovalis, nigro-fuscus, pubescens, antennarum basi, thoracis margine laterali et antico, tibiisque testaceis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Cy. marginatus. *Fabricius.—Steph. Catal.* 129. No. 1305.

Oval, fuscous-black, pubescent, with the base of the antennæ, the lateral and anterior margins of the thorax and the tibiæ testaceous.

The elytra have frequently a broad testaceous longitudinal patch on the disc, and the abdomen has sometimes a cloud of the same colour at the base.

Rare: specimens were first given to me by my friend L. W. Dillwyn, Esq., who says it is “not uncommon in summer on various plants in moist parts of the Penllergare-woods, and particularly about the large oak near the lower bridge.” “Yorkshire.”—*Mr. Chant.* “Liverpool.”—*Mr. J. Hutchinson.*

Sp. 9. pubescens. *Ovatus, nigro-fuscus, subpubescens, thorace brevissimo sinuato, supra elytris tibiisque griseo-testaceis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Ci. pubescens. *Fabricius.—Steph. Catal.* 129. No. 1306.

Ovate, fuscous-black, slightly pubescent: head black: thorax very short, sinuated on the anterior and posterior margins, griseo-testaceous: elytra of a livid griseo-testaceous: body beneath fuscous-black, with the segments slightly margined with pale ochraceous: femora fuscous; tibiæ and tarsi pale testaceous: antennæ with the second and third joints pale.

Less than either of the foregoing, and differs from the following in being broader and more depressed, exclusively of its colours.

Also very abundant in hedges throughout the metropolitan district; in Devonshire, near Edinburgh, Norfolk, Kent, &c.

Sp. 10. dorsalis. *Ovalis, ferrugineus, suturâ nigrâ ad apicem ferruginâ.* (Long. corp.  $1\frac{1}{2}$  lin.)

Cryptocephalus! dorsalis. *Marsham.*—Cy. dorsalis. *Steph. Catal.* 129. No. 1307.

Above ferruginous, with the suture black at the base, then fuscous towards the middle and ferruginous at the apex; body beneath fuscous, or rusty-black.

I suspect this insect may prove to be a mere variety of the foregoing, although Marsham and a recent compiler place it with the Cryptocephali! It is, however, rather narrower and more convex.

The original Marshamian specimen of this insect is the only example I have seen. "Has been taken on the alder, and by Mr. Jeffreys on the Crwmllyn sand-hills."—*L. W. Dillwyn, Esq.*

Sp. 11. griseus. *Ovatus, nigro-fuscus, pubescens, thorace brevissimo sinuato, elytris griseo-testaceis, antennarum basi pedibusque totis pallidis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Cy. griseus. *Fabricius.*—*Steph. Catal.* 129. No. 1308.

Ovate, fuscous-black, pubescent: head dusky, with the mouth testaceous: thorax very short, entirely of a fuscous-black hue, sinuated anteriorly and posteriorly: elytra griseous-testaceous, or deep castaneous, sometimes fuscous: antennæ with the four or five basal joints and legs entirely pale-testaceous.

Variable; sometimes entirely of a silken fuscous-black, with the mouth, base of the antennæ and legs testaceous; at others of a pale rufo-testaceous, with the eyes black, and the antennæ black at the apex; but all intermediate tints occur.

Extremely common in hedges and among herbage throughout the metropolitan district. "Rose Castle."—*T. C. Heysham, Esq.* "Nettles, Battersea-fields."—*Mr. Ingpen.* "Not unfrequently on flowers (near Swansea)."—*L. W. Dillwyn, Esq.*



Sp. 12. Padi. *Ovatus, nigro-fuscus, holosericeo-pubescent, elytrorum apice tibiisque pallidis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Ch. Padi. *Linné.*—Cy. Padi. *Steph. Catal.* 129. No. 1309.

Ovate, fuscous-black, clothed with silken pubescence; elytra rather deeply punctured, the apex pale, but the margin itself fuscous: tibiæ and tarsi pale-testaceous; the second and third joints of the antennæ the same.

Varies in being entirely of a pale-fuscous, with the pale spot at the apex of the elytra more or less expanded, and sometimes very obsolete.

Also common in the vicinity of London: I have likewise taken it at Dover, and on the coast of Sussex, in June. “Swansea.”—*Dr. Leach.*

Sp. 13. ater. *Brevis, ovatus, nitidus, fusco-niger, elytris pallidioribus, antennis nigro griseoque variis.* (Long. corp.  $\frac{5}{8}$  lin.)

Cy. ater. *Steph. Catal.* 129. No. 1310.

Short, ovate, fuscous-black, with the elytra paler, the antennæ varied with black and griseous, alternately.

Less than the last, and differs in being of a darker hue, and by having the antennæ varied with pale-griseous and black.

Found near London.

Sp. 14. ochraceus. *Oblongus, pallide ochraceus, oculis nigris, antennarum apice fuscescente.* (Long. corp.  $\frac{3}{4}$  lin.)

Cy. ochraceus *mihi.*

Oblong, entirely of a pale ochraceous, pubescent: with the eyes black, and the apex of the antennæ rather fuscescent.

Much less than either of the other species, and as oblong in proportion as Cy. melanura.

This minute species I found at Ripley, in 1827.

B. With the head exerted: the antennæ more or less serrated.

Sp. 15. angulosus. *Ferrugineus, capite thoraceque saturatioribus, convexis, nitidus, elytris angulis binis longitudinalibus elevatiusculis.* (Long. corp.  $1\frac{3}{4}$  lin.)

Crio. angulosa. *Marsham.*—Cy. angulosus. *Steph. Catal.* 129. No. 1311.

Head and thorax piceous; the latter convex, shining; mouth ferruginous: elytra ferruginous, thickly punctured, and sometimes a little clouded with dusky, with a duplex longitudinal slightly elevated carina reaching from the base nearly to the apex: body beneath ferruginous: antennæ black, with the base ferruginous: legs pale.

Many years since I captured a single example of this singular

insect, to which I find, by an old MSS., I applied the name *C. bicolor*; but having subsequently obtained the original Marshamian specimen of *Crioceris angulosa*, I have reverted to his name. Found in June, at Coombe-wood.

Sp. 16. *dubius*. *Oblongus, rufo-testaceus, pubescens, oculis nigris, corpore subtus antennarumque apice nigro-fuscis*. (Long. corp.  $1\frac{1}{2}$  lin.)

Cy. *dubius*. *Steph. Catal.* 129. No. 1312.

Oblong, rufo-testaceous, pubescent, with the eyes black, thorax immaculate rufo-testaceous: elytra with a slightly dusky streak on the suture: body beneath dusky-black, the segments and apex finely margined with testaceous: antennæ testaceous at the base, dusky at the apex, the second and third joints a little elongate.

Known from the rest of the genus by having the second and third joints of the antennæ slightly elongate, and from the preceding, with which it agrees in having the head exserted, by the thorax being testaceous, the elytra convex, and not carinated.

Found near London; I believe at Darent-wood, in June.

#### FAMILY XXXVI.—LAMPYRIDÆ, Kirby.

*Antennæ* filiform, approximating at the base, rather short, composed of compressed articulations, frequently serrated or pectinated. *Palpi*, *maxillary* much longer than the *labial*, which are usually small, very short, subcylindric or robust, with the terminal joint triangular: *mandibles* very acute, entire, or bidentate at the apex: *head* exserted or concealed beneath the anterior margin of the *thorax*, the latter transverse or semicircular: *body* oblong, more or less depressed: *tarsi* 5-jointed, with the penultimate joint bifid.

The typical genera of this family are distinguished by having the antennæ closely approximating at the base, and frequently pectinated or serrated, the articulations compressed; the body elongate, depressed, soft, &c., and the penultimate joint of the tarsi bilobed.

The larvæ are depressed, broad, and in the typical genus closely resemble the apterous females: they are, so far as known, carnivorous.

The following genera occur in Britain; but with regard to the location of the first I do not feel satisfied.

<i>Mandibulæ</i> apice	{	bidentatæ :	.	.	.	.	236. DRILUS.
		integres :	{				237. LAMPYRIS.
	Caput		{				exsertum, anticè in rostrum productum : 238. LYCUS.

GENUS CCXXXVI.—*DRILUS*, *Olivier*.

*Antennæ* rather stout, pectinated internally in the males, the second joint small, rounded; simple in the females. *Palpi* unequal, the *maxillary* elongate, with the terminal joint acute, the *labial* short, subcylindric: *maxillæ* not bilobed: *mandibles* emarginate at the apex: *labium* obsoletely emarginated; *head* short, exserted, almost as broad as the *thorax*, which is somewhat transverse, broader behind than in front: *body* elongate, arched: *elytra* flexible: *female* apterous.

As before stated, the location of this genus is objectionable; but as the habits of the larvæ closely resemble those of the true Lampyrides, doubtless its situation must be near them, from which the only known species may be distinguished by its transverse thorax, which is narrowed in front, the deeply pectinated antennæ, exserted head, and emarginate mandibles.

The larva resembles that of a glow-worm, but the sides of the abdomen are furnished with a series of conical fleshy lobes, and its back with two rows of hairy fascicles; the extremity of the body is forked, and the anal lobe is employed as a seventh leg: it feeds voraciously upon the *Helix aspersa*.

Sp. 1. *flavescens*. *Niger*, *pubescens*, *elytris flavescens*. (Long. corp. ♂  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.: ♀ 8—10? lin.)

*Dasytes flavescens*. *Olivier*.—*Steph. Catal.* 137. No. 1397.

Black, covered with a rich griseous pubescence: *elytra* flavescens, very soft and flexible, also clothed with a griseous pile. Female apterous, subcylindric, rather narrower in front, fleshy, yellowish orange, with two darker patches on the upper side of each segment of the body.

Not very uncommon in June, on high grass in the lanes about Darenth-wood; also taken near Gravesend, and I found two specimens at Dover, in June, 1819: at different periods I have captured nearly fifty specimens of the male, but the female—which is the *Cochleoctonus vorax* of Mielzinski—I have never beheld, though the sexes have been found in copulâ at Darenth by a gentleman residing at or near Gravesend.

GENUS CCXXXVII.—*LAMPYRIS* *Auctorum*.

*Antennæ* short, the articulations short, cylindric, compressed; the third as long as the following; the second small, the terminal one elongate, acute. *Palpi*, *maxillary* with the last joint trigonal ovate, compressed, acute at the apex: *labial* short. *Head* concealed beneath the anterior margin of the *thorax*, which is semicircular (in the indigenous species): *eyes* large: *body* soft, oblong-oval, much depressed: *abdomen* serrated on the lateral margin: *elytra* coria-

ceous, slightly flexible: *legs* compressed, simple. Females apterous, with the rudiments of elytra at the base of the abdomen.

This genus, which forms the type of the family, is to be known by having the antennæ short, approximating, the eyes large, the head small, concealed beneath the anterior edge of the thorax, which is semicircular, the body generally elongated and rather soft, and during life the terminal segments luminous, hence called *glow-worms*: the mandibles entire.

The larvæ closely resemble the perfect females; they are elongate, depressed, composed of thirteen broad segments, the centre thoracic one semicircular, gradually attenuated to the apex, and each with the posterior angle coloured; palpi and antennæ short; mandibles strong: legs, six short, triarticulate, with a small claw at the apex:—they feed upon small molluscous animals, especially those of the genus *Zonites* De Montfort; and not upon leaves or grass, as generally supposed.

Sp. 1. *noctiluca*. *Elongata, supra fusca, thoracis limbo cinereo; femina aptera.* (Long. corp. 5—8 lin.)

*La. noctiluca*. Linné.—*Samouelle, pl. 3. f. 1, ♂. f. 2, ♀.*—*Steph. Catal.* 129. No. 1313.

Elongate, above fuscous: eyes black: thorax with the disc fuscous, the margins throughout pale-cinereous: elytra with three elevated longitudinal lines, the disc rather thickly and finely rugulose-punctate: body beneath pale-fuscous, with the terminal segments flavescent: legs and antennæ fuscous. Female apterous: the abdomen entirely of an immaculate fuscous above, with the apex paler; the head and thorax as in the male.

Larva similar to the female, but each segment of the abdomen and the angles of the thorax with a triangular flavescent spot on the margin.

This is the common and apparently the only indigenous species of true glow-worm, the *La splendidula* having been erroneously introduced into our Fauna: it is abundant in grassy places on heaths, by the sides of woods and in lanes. “Rose Castle, Black-Hall-

‡ Sp. 2. *splendidula*. *Elongata, supra fusca, thorace antice lunulis duabus fenestrato-pellucidis; femina aptera.* (Long. corp. 6 lin.)

*La. splendidula*. Linné.—*Stewart (!)*—*Steph. Catal.* 130. No. 1314. note.

Elongate, above fuscous, the thorax anteriorly, with two transparent glabrous lunules in front: female apterous, varied with ashy-white.

Stewart introduces this insect into our Fauna, but without giving any authority for so doing: the example in the Marshamian collection, considered as this species by Marsham, is a mere dwarf variety of *L. noctiluca*.

wood, Barrock Lodge, &c.”—*T. C. Heysham, Esq.* “Stockton-common, near York; Stella, near Newcastle, Wastwater and Ulpha, Cumberland; and Brignall, in Yorkshire.”—*W. C. Hewitson, Esq.* “Epping.”—*Mr. Doubleday.* “Not uncommon (near Swansea).”—*L. W. Dillwyn, Esq.* “Netley.”—*Rev. F. W. Hope.*

GENUS CCXXXVIII.—LYCUS, *Fabricius.*

*Antennæ* rather elongate, compressed, sometimes serrated: the first and second joints subovate, the last very short: the third shorter than the fourth, which is about of equal length with the terminal one; the remainder gradually diminishing in length to the end. *Palpi*, maxillary with the terminal joint subtrigonal, broadest at the apex: *labial* short, robust; the terminal joint largest: *head* small, inclined, produced in front into a rostrum: *eyes* small: *thorax* subquadrate: *body* oblong, depressed: *elytra* very flexible, a little dilated behind: *legs* slightly compressed, robust.

This pretty genus differs from *Lampyris* by having the head exserted, the maxillary palpi of different form, the labial very robust: the head small, produced in front into a kind of rostrum: the thorax subquadrate, and the female winged:—the species reside in and upon trees.

Sp. 3. *minutus.* *Ater, holosericeo-pubescent, antennarum apice testaceo, elytris costalis sanguineis crebrè reticulato-punctatis.* (Long. corp. 3—4 lin.)

Ly. *minutus.* *Fabricius.*—*Steph. Catal.* 130. No. 1317.—*Curtis*, vi. pl. 263.

† Sp. 1. *sanguineus.* *Ater nitidus, thoracis lateribus elytrisque sanguineis, his obsolete striatis villosis.* (Long. corp. 4 lin.)

La. *sanguinea.* *Linné.*—*Stewart (!)*—Ly. *sanguineus.* *Steph. Catal.* 130. No. 1315. note.

Glossy-black, with the sides of the thorax and the elytra blood-red, the latter obsoletely villose.

Given by Stewart, without any authority, as indigenous.

† Sp. 2. *festiva.* *Ater, thoracis marginibus elytrisque rufo-fulvis, his apice fuscis, antennis pectinatis.* (Long. corp. 6 lin.)

La. *festiva.* *Donovan (!)*—Ly. ? *festivus.* *Steph. Catal.* 130. No. 1316. note.

Black, with the margins of the thorax and the elytra rufo-fulvous, the apex of the latter black: antennæ pectinated.

Whether this be truly an indigenous species is uncertain: it is given as such by Donovan, who obtained it from Mr. Drury's cabinet, but without any notice of its locality: it is possible that it might have been placed therein—in accordance with the bad taste of his time—in lieu of *L. minutus*.

Black, clothed with a fine pubescence: the apical joint of the antennæ pale-testaceous: the thorax black, foveolated: elytra blood-red, with four elevated lines on each, the interstices with a double series of punctures within, forming a beautiful reticulated appearance.

This elegant insect is apparently very rare in Britain, not more than twenty or thirty examples having occurred in as many years: it has been found on the oak at Coombe and Birch woods, in August and September; also near Tunbridge Wells, and in Norfolk. “Woodland, Devon, July.”—*Dr. Leach*.

#### FAMILY XXXVII.—TELEPHORIDÆ, *Leach*.

*Antennæ* setaceous, rather long, somewhat remote at their base, the joints generally cylindric and elongated, sometimes slightly serrated. *Palpi* unequal; *maxillary* longer than the *labial*, the terminal joint ovate or securiform: *mandibles* entire, acute: *body* oblong, very soft, slightly depressed: *elytra* as long as, or shorter than, the abdomen: *tarsi* 5-jointed, the penultimate joint bifid.

The Telephoridæ in their perfect state are decidedly carnivorous: they differ from the insects of the foregoing family by having the antennæ remote at their origin, and setaceous, the articulations elongated; the head broad, vertical, not concealed beneath the anterior margin of the thorax, nor produced into a rostrum; and from the Melyridæ, by having the penultimate joint of the tarsi bifid: two genera only occur in Britain, as hereunder briefly characterized.

The larvæ are elongate, somewhat flattened below, composed of twelve rings, and a flat scaly head, furnished with two stout mandibles, two small antennæ and four palpi: the body is soft, the three first joints have each a pair of long scaly three-jointed legs, terminated by a slightly curved hook, and, on the last segment, a fleshy tubercle answering the purpose of a seventh leg: they reside in damp earth, and are carnivorous, according to De Geer.

<i>Elytra</i> {	abdominis longitudine, <i>alis</i> tegentibus:	239. TELEPHORUS.
	abdomine breviora, <i>alis</i> haud tegentibus:	240. MALTHINUS.

#### GENUS CCXXXIX.—TELEPHORUS, *De Geer*.

*Antennæ* elongate, the basal joint robust; the second small; third shorter than the fourth; the remainder gradually decreasing in length to the last, which is as long as the fourth and subfusiform. *Palpi* with the terminal joint

securiform: *maxillæ* bilobed: *head* nutant, suborbicular: *thorax* suborbicular: *body* elongated, soft: *elytra* as long as the abdomen, covering the wings.

The insects of this genus may be at once known from the Malthini by having the *elytra* as long as, or longer than, the abdomen, and the terminal joint of the palpi securiform, exclusively of their comparatively gigantic bulk: they are very active insects, fly with considerable rapidity in the sunshine; they appear towards the middle or the end of spring, frequenting umbelliferous and other flowers for the sake of the insects therein, being extremely voracious, some of them not sparing even their own species:—they vary greatly, and from the number of species and their diversity of structure, I have divided the genus into sections, for the convenience of more readily ascertaining them: their antennæ are said to differ in structure amongst individuals of the same species; but this anomaly I have not observed; and which I conceive has only occurred where *species* have been assumed to be mere *varieties*; in which case a discrepancy might be apparent.

A. With the sides of the thorax scarcely rounded.

a. With the thorax transverse, the lateral margins cut out behind (*antennæ* serrated, with the second joint minute).

Sp. 1. *ruficollis*. *Ater*, ore, thorace, abdomineque rufis. (Long. corp. 3—3½ lin.)

Ca. *ruficollis*. *Fabricius*.—Te. *ruficollis*. *Steph. Catal.* 130. No. 1318.

Head black, mouth rufous: thorax immaculate rufous, the disc foveolated: *elytra* black: scutellum and breast the same; wings fuscous: abdomen rufous: legs and antennæ black, the latter serrated.

This insect is doubtless the *Cantharis ruficollis* of the *Systema Entomologia* of *Fabricius*; but in his latter works he refers to *Sulzer*, plate vi. f. 6, which represents an insect at least twice as long:—the serrated antennæ and excised thorax well distinguish it from its congeners.

Apparently rare, being very seldom found within the metropolitan district: I have obtained specimens from Norfolk. “*Ep-ping*.”—*Mr. Doubleday*. “*Swansea*.”—*L. W. Dillwyn, Esq.*

b. With the thorax transverse, the posterior angles entire.

1. Antennæ with the second joint much shorter than the third.

Sp. 2. *thoracicus*. *Rufo-testaceus*, vertice, antennarum apice, elytrisque nigris, pectore piceo. (Long. corp. 3½—4 lin.)

Te. *thoracicus*. *Olivier*.—*Steph. Catal.* 130. No. 1319.

Head black behind, rufo-testaceous anteriorly: thorax immaculate rufo-testaceous: scutellum subtestaceous: elytra black, pubescent, rugose-punctate: breast piceous, or somewhat testaceous: abdomen yellow-testaceous, immaculate; legs entirely of the same colour, but paler, with the tarsi obscure: antennæ with the three or four basal joints testaceous, the rest black.

Abundant throughout the metropolitan district, and not common in other parts of the country. "Davidson's Bank, Cumb."—*T. C. Heysham, Esq.* "Glanville's Wootton."—*J. C. Dale, Esq.* "Southend."—*Rev. F. W. Hope.* "Common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 3. *fulvicollis.* *Niger, ore, antennarum basi, thorace, ano pedibusque rufo-testaceis.* (Long. corp. 3—3½ lin.)

Te. *fulvicollis.* *Sahlberg.*—*Steph. Catal.* 130. No. 1320.

Head black, with the mouth testaceous: thorax rufous, immaculate, or with a few blackish marks towards the base: scutellum piceous: elytra linear, totally black, slightly pubescent, thickly rugose-punctate: thorax beneath black in the middle, with the sides testaceous: breast black: abdomen broad, testaceous yellow, the anterior segments each with a broad transverse black fascia at the base: legs rufo-testaceous, with the tarsi somewhat dusky: antennæ with the three or four basal joints testaceous, the rest black: apex of the maxillary palpi black.

Less common than the foregoing, but far from scarce within the metropolitan district and elsewhere. "Epping."—*Mr. Double-day.* "Glanville's Wootton."—*J. C. Dale, Esq.*

Sp. 4. *affinis.* *Linearis-elongatus, rufo-testaceus, vertice, thorace anticè, elytris, pectore, abdominis basi antennarumque apice nigris.* (Long. corp. 3 lin.)

Te. *affinis.* *Steph. Catal.* 130. No. 1321.

Linear-elongate: rufo-testaceous, with the head behind, the anterior margin of the thorax, the elytra, breast, base of the abdomen and apex of the antennæ black; the tarsi fuscous.

More elongate in proportion than the preceding insect, and differs in having the anterior edge of the thorax dusky or black, the palpi concolorous, and the abdomen more decidedly testaceous at the apex:—it may possibly, however, be a mere variety of that insect; but I possess several examples of each sex, of both insects.

Also a common species within the metropolitan district.

Sp. 5. *ater.* *Elongatus, fusco-niger, antennarum basi tibiisque totis pallide luteis, thorace breviori subtransverso.* (Long. corp. 3—3½ lin.)

Ca. *atra.* *Linné.*—Te. *ater.* *Steph. Catal.* 130. No. 1322.

Elongate: head black: mouth testaceous: thorax fuscous-black, with the margins testaceous: scutellum and elytra also of the same hue, the latter clothed



with a griseous pubescence: abdomen black: femora black, with the apex broadly flavescent or pale-testaceous; tibiæ entirely of the latter colour; tarsi fuscous: antennæ with the three basal joints flavescent, the rest black.

In some examples the thorax has the disc almost totally rufous; but these varieties may be known by the dusky base of the femora from the preceding insect.

Not uncommon in June and July in woody and damp situations.  
 “Glanville’s Wootton.”—*J. C. Dale, Esq.*

Sp. 6. *flavilabris*. *Oblongus, niger, ore, antennarum basi, thoracis limbo, tibiis anoque pallide rufo-testaceis.* (Long. corp. 3—3½ lin.)

Ca. *flavilabris*. *Fallen.*—Te. *flavilabris*. *Steph. Catal.* 131. No. 1323.

Oblong, black: with the mouth, the three basal joints of the antennæ, the margins of the thorax, the disc of which is very glossy, the tibiæ and apex of the abdomen pale rufo-testaceous: palpi fuscous.

Variable in the colour of the thorax, which is sometimes rufous, with a small central black patch; the legs are occasionally without the dusky base of the femora, and the palpi but slightly fuscous.

This closely resembles the preceding species, but it is of a deeper black, &c.

Less abundant than the three or four last-mentioned species, though far from uncommon within the metropolitan district.  
 “Waterford, in Ireland.”—*Dr. Leach.* “On flowers (near Swansea), not common.”—*L. W. Dillwyn, Esq.*

Sp. 7. *pulicarius*. *Oblongus, niger, mandibulis, thoracis limbo toto, abdominis margine, anoque testaceis.* (Long. corp. 2—2½ lin.)

Te. *pulicarius*. *Olivier ?*—*Steph. Catal.* 131. No. 1324.

Oblong: head black, with the mandibles testaceous: thorax with the disc black, shining, the margins testaceous-yellow, the lateral margins being most broadly edged: scutellum and elytra black, the latter finely rugose-punctate and densely pubescent; beneath black, with the margins of the abdomen narrowly, and the apex broadly, testaceous: legs entirely black, with the claws alone testaceous: antennæ with the basal joints testaceous beneath, the rest black.

Of this species I possess a pair, taken either in the north of England or in Scotland by Mr. Dale, who presented me with the specimens.

2. Antennæ with the second and third joints nearly of equal length.

Sp. 8. *lateralis*. *Niger, capite antice, antennis infernè, thorace toto, abdominis limbo pedibusque rufo-testaceis, elytrorum margine laterali apiceque flavis.* (Long. corp. 2—2½ lin.)

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Ca. lateralis. *Linné*.—Te. lateralis. *Steph. Catal.* 131. No. 1325.

Black: with the head anteriorly, the antennæ beneath, the entire thorax, the margins of the abdomen and the legs rufo-testaceous; the lateral margins of the elytra and the apex flavescent: the elytra densely clothed with a short cinereous pubescence.

The posterior tibiæ have frequently a broad dusky ring in the middle.

Not common: I have occasionally met with it in the Robin-Hood Lane, leading to Coombe-wood, and possess examples taken near Bristol. "Epping."—*Mr. Doubleday*. "Southend."—*Rev. F. W. Hope*.

Sp. 9. marginatus. *Niger, capite anticè antennarum basi thoracis margine abdominisque limbo rufo-testaceis, elytrorum margine laterali apiceque flavis, pedibus rufo-testaceis nigro variis.* (*Long. corp.*  $2\frac{1}{2}$  lin.)

Te. marginatus. *Steph. Catal.* 131. No. 1326.

Deep black, pubescent: head anteriorly, base of the antennæ, margins of the thorax, and edge of the abdomen rufo-testaceous: elytra with the lateral margin and the apex yellow: femora fuscous, with the base and apex pale rufo-testaceous; tibiæ the same; tarsi obscure.

Differs from the foregoing by being rather more slender, with the disc of the thorax black, and the femora and tibiæ also varied with the latter colour, or fuscous.

Taken at Darent-wood by myself many years since.

Sp. 10. testaceus. *Brevior, niger, subnitidus, thorace quadrato lateribus testaceo, antennarum basi, elytris tibiisque pallidis.* (*Long. corp.* 2—3 lin.)

Te. testaceus. *De Geer*.—*Steph. Catal.* 131. No. 1327.—Ca. testacea. *Martyn, pl.* 29. f. 6.

Short, black, slightly glossy: the thorax quadrate, with the lateral margins testaceous, the base of the antennæ, the elytra and the tibiæ pale-ochraceous: palpi fuscous.

The coloured legs and palpi, and shorter thorax, distinguish this from the following insect.

Common throughout the metropolitan district, and also found in other places abundantly. "Baron-wood."—*T. C. Heysham, Esq.* "Epping."—*Mr. Doubleday*. "Glanville's 'Wootton.'"—*J. C. Dale, Esq.* "Common (near Swansea)."—*L. W. Dillwyn, Esq.* "Netley and Southend."—*Rev. F. W. Hope*.

Sp. 11. ochropus. *Niger, subnitidus, thorace longiori lateribus latè testaceis, antennarum basi elytris pedibusque pallidis.* (*Long. corp.*  $2\frac{1}{2}$ —3 lin.)

Te. pallipes. *Steph. Catal.* 131. No. 1328.

Black, slightly glossy, with the thorax a little elongate, the lateral margins broadly testaceous; the base of the antennæ, elytra, and legs entirely pale-ochraceous; palpi the same.

It is possible this may be a mere variety of the foregoing, but its form appears dissimilar, exclusively of the colour of its legs:—the name *pallipes* I find used by Fabricius; I have therefore been compelled to substitute a new one.

Also common within the metropolitan district; and I have received it from Devonshire, the New Forest, Norfolk, &c. “Common (near Swansea).”—*L. W. Dillwyn, Esq.*

*c. With the thorax elongated (antennæ long).*

Sp. 12. *pallidus*. *Lineari-elongatus, niger, nitidus, antennarum basi, elytris pedibusque pallidis, thorace angustiori posticè truncato.* (Long. corp. 3—3 $\frac{3}{4}$  lin.)

Ca. *pallida*. *Fabricius*.—*Te. pallidus*. *Steph. Catal.* 131. No. 1329.

Linear-elongate, shining-black, with the base of the antennæ, the elytra entirely, and the legs pale-ochraceous; the thorax totally black, narrow, and truncate behind.

The black thorax and immaculate elytra distinguish this from the other species of this section.

Not very abundant within the metropolitan district, but far from uncommon, frequenting hedges and trees. “Rather common (near Swansea).”—*L. W. Dillwyn, Esq.* “Rose Castle.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday*. “Near Oxford.”—*J. C. Dale, Esq.*

Sp. 13. *fuscicornis*. *Niger, thorace subquadrangulo rufescente, elytris ochraceis apice fuscis, pedibus pallidis.* (Long. corp. 3—3 $\frac{1}{2}$  lin.)

*Te. fuscicornis*. *Olivier*.—*Steph. Catal.* 131. No. 1330.

Black, slightly pubescent: thorax subquadrangular, rufescent: elytra ochraceous, with the apex more or less fuscous; legs pale.

The black apex of the elytra, combined with the subquadrate thorax, black body, and pale legs, distinguish this from the following species, which has also the apex of the elytra black.

Not very common, but found within the metropolitan district: in Norfolk, Suffolk, Essex, Hants, Sussex, &c. “Crwmlyn-burrows and Penllergare, not common.”—*L. W. Dillwyn, Esq.*

Sp. 14. *melanurus*. *Luteo-rufus, thorace elongato antice angustiori, antennis tarsis, apiceque elytrorum nigris.* (Long. corp. 3 $\frac{1}{2}$ —4 $\frac{1}{2}$  lin.)

Ca. *melanura*. *Fabricius*.—*Te. melanurus*. *Steph. Catal.* 131. No. 1331.

Pale-rufous: the thorax elongate, narrowed in front: the antennæ, tarsi, and apex of the elytra black.

The distinctly elongate thorax, black antennæ and tarsi, and rufous body, are the chief distinctive characters of this insect.

Very abundant throughout the metropolitan district, and I believe not uncommon in most parts of the country. "Davidson's Bank."—*T. C. Heysham, Esq.* "Epping."—*Mr. Doubleday.* "Glanville's Wootton."—*J. C. Dale, Esq.* "Very common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 15. pilosus. *Lineari-elongatus, fusco-testaceus, longius pilosus, thorace angustiori subquadrato, marginato.* (Long. corp. 4—4½ lin.)

Ca. pilosa. *Paykul.*—Te. pilosus. *Steph. Catal.* 131. No. 1332.

Elongate, linear; of a deep dusky-testaceous: eyes very prominent, deep black; antennæ fuscous, with the base pale: thorax rather deeply margined, the disc pilose, dusky-testaceous: elytra elongate, of an ochraceous-fuscous, very pilose; body beneath with the apex pale: legs more or less deeply testaceous.

Var. β. With the antennæ and legs entirely of a pale testaceous, the thorax slightly rufescent, and the elytra pale.

Whether Var. β. be the *Telephorus unicolor* of Curtis I am unable to decide: it is the species originally called *Te. longicornis* by me in my MSS.

Four or five examples of this species are the only specimens that have come beneath my observation: one I captured at Ripley, in June, 1827, and the others have all been taken at Darenth.

#### B. With the sides of the thorax distinctly rounded.

##### a. With the thorax rounded anteriorly.

##### 1. Antennæ with the second joint scarcely longer than the third.

Sp. 16. clypeatus. *Suprà pallidus, vertice thoracisque disco anteriùs angustato nigro, pedibus pallidis, posticis infuscatis.* (Long. corp. 3½—4 lin.)

Ca. clypeata. *Illiger.*—Te. clypeatus. *Steph. Catal.* 131. No. 1333.

Above pale, with the hinder part of the head and the disc of the thorax black, the colour of the latter narrowed in front; the legs pale, the posterior clouded with fuscous.

The clear whitish-ochreous margins to the thorax, and the glossy-black central discoidal spot on the latter, with the pale legs and antennæ, are the more prominent characters of this insect.

This species, I believe, is not found within the metropolitan district: I have taken it at Dover and near Hastings: it occurs in Suffolk, and in South Wales is not very uncommon. "In woods (near Swansea) not uncommon."—*L. W. Dillwyn, Esq.*

Sp. 17. *dispar*. *Niger, thorace lævis rufo immaculato, abdominis limbo pedibusque rufis, genubus tibiisque posticis nigris.* (Long. corp. 5—6 lin.)

Ca. *dispar*. *Fabricius*.—Te. *dispar*. *Steph. Catal.* 132. No. 1334.

Black: thorax smooth, immaculate rufous; elytra fuscous-black, the margins of the abdomen and anterior legs rufous; the intermediate with a spot at the tip of the femora, and the middle of the tibiæ black; the posterior femora at the apex, and the tibiæ and tarsi entirely of a fuscous-black: antennæ also black, with two or three of the basal joints testaceous: eyes black.

Occasionally found near London, and in the north of England.  
“Not uncommon (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 18. *nigricans*. *Fusco-niger, ore, antennarum basi, thoracis abdomineque limbo, pedibusque flavo-testaceis, tibiis posticis fuscis.* (Long. corp. 5—6 lin.)

Ca. *nigricans*. *Fabricius*.—Te. *nigricans*. *Steph. Catal.* 132. No. 1335.

Fuscous-black, with the mouth, base of the antennæ, margin of the thorax and of the abdomen, and the legs pale-testaceous; the apex of the hinder femora and the posterior tibiæ entirely fuscous or black.

Varies in having the disc of the thorax slightly fuscous, and the abdomen being sometimes entirely rufous.

Abundant in woods and hedges in June. “Glanville’s Wootton.”  
—*J. C. Dale, Esq.* “Common (near Swansea).”—*L. W. Dillwyn, Esq.* “Southend.”—*Rev. F. W. Hope.*

Sp. 19. *discoideus*. *Fusco-niger, ore, antennarum basi thoracis abdominisque limbo pedibusque rufo-testaceis, femoribus posticis tibiærumque basi fuscescentibus.* (Long. corp. 4—5 lin.)

Te. *discoideus*. *Steph. Catal.* 132. No. 1336.

Fuscous-black, with the mouth, base of the antennæ, margin of the thorax and of the abdomen, and the legs rufo-testaceous, the posterior femora with a small black dot at the apex, and the base of the posterior tibiæ dusky or black.

Smaller and rather more slender in proportion than the foregoing insect, which it greatly resembles: its colours are however different, being more of a rufous hue, the margins of the thorax in this being nearly of the latter colour, whereas in the foregoing species they are ochraceous or nearly white: the posterior legs also differ.

Less common than the foregoing, but nevertheless not of unfrequent occurrence throughout the metropolitan district.

Sp. 20. *obscurus*. *Niger, thoracis lateribus summoque abdominis margine rufo-pallidis, pedibus totis nigris.* (Long. corp.  $4\frac{1}{2}$ — $5\frac{1}{2}$  lin.)

Ca. *obscura*. *Linné*.—Te. *obscurus*. *Steph. Catal.* 132. No. 1337.

Black, rather shining, pubescent; with the lateral margins of the thorax pale-rufous: the margin and apex of the abdomen and the mandibles the same: the legs entirely black; the two basal joints of the antennæ beneath pale-rufous; the remainder black.

Distinguished at once by having the lateral margins only of the thorax bright-rufous, with the rest of the thorax and the legs totally black.

Rare in the south of England, but apparently not very uncommon in the north.

## 2. Antennæ with the second joint shorter than the third.

Sp. 22. *cyaneus*. *Ater, nitidus, pubescens, capite anticè, thorace abdomineque rufis, elytris cyaneis*. (Long. corp. 6—8 lin.)

Te. *cyaneus*. *Curtis*, vi. pl. 215.—Te. *tricolor*. *Steph. Catal.* 132. No. 1338.

Shining-black, pubescent: head anteriorly, thorax and abdomen rufous: elytra cyaneous, rugose, with three obscure lines on each: palpi and apex of the mandibles dusky-black: basal joint of the antennæ rufous beneath, the apex and rest of the antennæ black.

Known from the following species, with which it has been confounded, by its entirely black legs:—Marsham long since applied the name *tricolor* thereto, which has ridiculously enough been changed to the appellation it now bears: it may be the *cyanipennis* of Ziegler, a more apt designation.

† Sp. 21. *longicornis*. *Luteus, elytris testaceis, apice nigris, antennis longitudine corporis*.

Ca. *longicornis*. *Fabricius*, E. i. 302.—Te. *longicornis*. *Curtis*, fo. 215. (!)—*Steph. Catal.* 411. No. 1337.\* note.

Luteous, with the elytra testaceous, black at the apex, the antennæ as long as the body.

Introduced as British in the work above cited, but evidently without any authority: the insect here described is Brazilian, and the blunder originated from the misapplication of my MSS. name of *longicornis*, in an endeavour to conceal its origin.

† Sp. 23. *violaceus*. *Niger, capite, thorace, abdomine pedibusque rufis, elytris cæruleis, antennarum articulo primo pallido*.

Ca. *violacea*. *Paykul*.—Te. *violaceus*. *Wilkin* (!)—*Steph. Catal.* 132. No. 1339. notes.

Black, with the head, thorax, abdomen and legs rufous, the elytra cyaneous, the basal joint of the antennæ pale: the crown of the head more or less dusky in the male.

Introduced by mistake for the preceding insect in Wilkin's Catalogue of the rare insects contained in his collection.

First taken by Messrs. Salt and Atkinson in Yorkshire, and more recently by Mr. Chant. “Newbiggin-wood.”—*T. C. Heysham, Esq.* “Midgely Moor.”—*Mr. Gibson.*

Sp. 24. *pellucidus*. *Niger, capite anticè thoracè abdomineque totis rufis, pedibus rufis, tibiis posterioribus nigris.* (Long. corp. 5—6 lin.)

Ca. *pellucida*. *Fabricius*.—Te. *pellucidus*. *Steph. Catal.* 132. No. 1340.

Black; with the head anteriorly, the thorax, abdomen, and legs rufous, the posterior tibiæ black, and the apex of the femora slightly so.

Allied to the following, which I think it probable may be a variety, as there stated: it differs in having the entire abdomen rufous, and the apex of the femora dusky or black.

Not uncommon throughout the metropolitan district: also found in other parts; and I have seen examples from Edinburgh. “North Wales and Netley.”—*Rev. F. W. Hope.* “Common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 25. *cantianus*. *Niger, capite anticè thoracè toto abdominisque apice rufis, pedibus rufis, tibiis posterioribus fusco-nigris.* (Long. corp. 5—6 lin.)

Te. *cantianus*. *Steph. Catal.* 132. No. 1341.

Black, with the head anteriorly, the entire thorax and the apex of the abdomen rufous; the legs also rufous, with the posterior tibiæ of a dusky-black.

Differs from the foregoing in having the base of the abdomen black, and in being somewhat larger; but I suspect it may be only a variety.

Found in various parts of the country: I originally gave the above name to my specimens, from having at the time merely observed those which I had captured at Darent-wood; but notwithstanding the insect has occurred in many other counties, I do not choose to follow the inconvenient plan adopted by others of wilfully changing the name.

Sp. 26. *fuscus*. *Niger, thoracè punctato, rufo, maculâ anticâ nigrâ, abdominis limbo rubro, pedibus nigro-fuscis.* (Long. corp. 7—8 lin.)

Ca. *fuscus*. *Linné*.—*Barbut. pl.* 6. f. 3.—Te. *fuscus*. *Steph. Catal.* 132. No. 1342.

Black, slightly pubescent: thorax punctate, rufous, with a black spot on the anterior margin of variable size: head rufous anteriorly; the three basal joints of the antennæ the same, the rest black: abdomen black, with the margins broadly rufous: legs entirely black.

The anterior femora are sometimes slightly testaceous at the base.

The black legs and anterior black patch on the thorax distinguish this from the following insect.

Rare near London, but rather abundant in the midland and northern counties. "Netley."—*Rev. F. W. Hope*. "Hyde-park."—*A. Cooper, Esq.* "Glanville's Wootton."—*J. C. Dale, Esq.* "Common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 27. *rusticus*. *Niger, thorace punctato, maculâ disci nigrâ, femoribus omnibus rufis, apice nigris.* (Long. corp. 5—6 lin.)

Ca. *rustica*. *Gyllenhal*.—Te. *rusticus*. *Steph. Catal.* 132. No. 1343.

Black, pubescent: thorax punctate, rufous, with a central black spot: head anteriorly, base of the antennæ and of the femora, and margin of the abdomen, rufous: apex of the antennæ and femora, the tibiæ, and tarsi fuscous-black. The central black spot in the disc of the thorax, rufous femora, and smaller size, are the chief characters of distinction between this and the preceding insect.

Extremely common in May and June in the south of England. "Glanville's Wootton."—*J. C. Dale, Esq.* "Scarborough."—*W. Bean, Esq.* "Very common (near Swansea)."—*L. W. Dillwyn, Esq.* "North Wales."—*Rev. F. W. Hope*.

Sp. 28. *lividus*. *Rufo-testaceus, thorace rotundato immaculato, maculâ frontali, pectore, abdominis basi, genubus tibiisque posticis nigris.* (Long. corp. 5—6½ lin.)

Ca. *livida*. *Linné*.—*Barbut. pl. vi. f. 8*.—Te. *lividus*. *Steph. Catal.* 132. No. 1344.

Rufo-testaceous, pubescent: thorax rounded, immaculate: a small spot on the forehead, the breast, and base of the abdomen, the apex of the hinder femora, and the hinder tibiæ black: tip of the antennæ fuscous.

In some examples the entire vertex is fuscous, and the tips of the four posterior femora, with the four hinder tibiæ, are black.

The black frontal spot and posterior tibiæ serve to distinguish this common species.

Perhaps the most abundant species of this genus in Britain; scarcely an umbelliferous flower being without a specimen during May and June. "Baron-wood."—*T. C. Heysham, Esq.* "Epping."—*Mr. Doubleday*. "Glanville's Wootton."—*J. C. Dale, Esq.* "Very common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 29. *confinis*. *Rufo-testaceus, pectore abdominis basi oculisque nigris, pedibus toto pallidè testaceis.* (Long. corp. 4½—5 lin.)

Te. *confinis*. *Steph. Catal.* 132. No. 1345.

Rufo-testaceous, pubescent; thorax shining immaculate; breast and base of the abdomen, with the eyes, black: legs and antennæ entirely of a pale testaceous.



The totally pale legs distinguish this from *Te. lividus*, and the pale elytra and dark breast and abdomen from the following.

Taken near London, and in Somersetshire: communicated by Mr. Millard from the last county.

Sp. 30. *testaceipes*. *Rufo-testaceus, oculis nigris, pectore abdominisque basi piceis, elytris testaceo-fuscis, pedibus testaceis.* (Long. corp. 5 lin.)

*Te. testaceipes mihi.*—*Te. analis.* *Steph. Catal.* 133. No. 1347: *DELE* *Ca. analis.* *Fabricius.*

Rufo-testaceous, pubescent: eyes black: breast and base of the abdomen piceous: elytra testaceous-brown: legs totally pale rufo-testaceous: each joint of the antennæ tipped with fuscous.

Intermediate between the preceding and following species, from the former of which it differs by having the elytra fuscous, and the breast piceous; and from the following by the thorax being immaculate, and the legs totally rufo-testaceous:—it is not the *Ca. analis* of Fabricius.

Found, near Ripley, by myself: “Epping.”—*Mr. Hanson.*

Sp. 31. *lituratus*. *Suprà testaceus, thorace posticè liturâ angulatâ nigrâ, pedibus testaceis, femoribus nigro-lineatis.* (Long. corp.  $4\frac{1}{2}$ —5 lin.)

*Ca. liturata.* *Gyllenhal.*—*Te. lituratus.* *Steph. Catal.* 133. No. 1346.

Above testaceous, pubescent: thorax rather glossy, with several angulated confluent marks behind: eyes black: breast and abdomen at the base black, the latter with the margins of the segments, and the apex, testaceous: elytra generally pale-testaceous: legs variable, sometimes with the femora testaceous, lineated with black, or dusky striped with testaceous; tibiæ sometimes with a black or dusky spot towards the apex, the joints always pale.

The thorax is sometimes immaculate; and the elytra occasionally fusco-testaceous; with the thoracic mark very distinct, and the legs very dark.

Not common near London; the only locality I am aware of being Walsam-meadows, near Ripley, where I met with several specimens in June, 1827. “Bristol.”—*Mr. J. Millard.* “Glanville’s Wootton.”—*J. C. Dale, Esq.* “On flowers (near Swansea), not very common.”—*L. W. Dillwyn, Esq.*

Sp. 32. *rufus*. *Rufo-testaceus, thorace subquadrato, elytris ochraceis, oculis alis pectoreque nigricantibus.* (Long. corp.  $3-4\frac{1}{2}$  lin.)

*Ca. rufa.* *Linné.*—*Te. rufus.* *Steph. Catal.* 133. No. 1348.

Rufo-testaceous, slightly pubescent: thorax subquadrate, shining immaculate: eyes, wings, and breast dusky or black: elytra ochraceous: abdomen testa-

ceous, with the anterior segments black at the base: legs entirely rufo-testaceous, immaculate, tarsi obscure.

Rather variable, the breast and basal segments of the abdomen being concolorous with the body.

The immaculate legs, and less brilliant colour, distinguish this from *Te. bicolor*, its nearest ally.

Not uncommon in the south of England, and in South Wales. "Epping."—*Mr. Doubleday*. "Glanville's Wootton."—*J. C. Dale, Esq.* "Not uncommon (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 33. *bicolor*. *Rufo-testaceus, oculis, alis, pectore, abdominis basi, genibusque posterioribus nigris.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

Ca. *bicolor*. *Fabricius*.—*Te. bicolor*. *Steph. Catal.* 133. No. 1349.

Rufo-testaceous; slightly pubescent: with the eyes, wings, breast, base of the abdomen, and four posterior knees black: the antennæ dusky towards the apex: thorax immaculate.

The two posterior knees are sometimes alone black, and the posterior tibiæ are occasionally a little fuscous.

The black joints of the hinder legs, and the brighter rufescent colour and smaller size of the insect, are the principal points of difference between this and the foregoing.

Equally abundant with the preceding species. "Glanville's Wootton."—*J. C. Dale, Esq.* "In gardens (near Swansea), very common."—*L. W. Dillwyn, Esq.*

b. *With the thorax truncate anteriorly (antennæ with the second and third joints short).*

Sp. 34. *alpinus*. *Suprà testaceus, vertice attenuato nigro, thorace transverso posticè submarginato, utrinque unidentato.* (Long. corp. 6—7 lin.)

Ca. *alpinus*. *Paykul*.—*Te. alpinus*. *Steph. Catal.* 143. No. 1350.

Testaceous: head attenuated behind and black, testaceous in front; eyes large, black, and very prominent: thorax transverse, truncate anteriorly, submarginate posteriorly, and the hinder angles produced into a minute tooth; the disc rufo-testaceous, unequal, with a more or less distinct black central spot: elytra of a lurid testaceous, rugose-punctate, pubescent: body dusky-black, with the sides and margins of the segments and the apex testaceous; legs testaceous, with the tarsi dusky.

The elytra are sometimes of a fuscous-black: and the hinder femora and tibiæ are occasionally blackish.

The only localities I know for this remarkable species are Darenth and Coombe woods: in the former place it is not uncommon

among oaks and other high trees, but it is somewhat rare in the latter. “Glanville’s Wootton.”—*J. C. Dale, Esq.*

GENUS CCXL.—MALTHINUS, *Latreille*.

*Antennæ* elongate, slender, filiform, rather distant at their origin; the second and third joints shortest; the remainder elongate, cylindric; the basal one subclavate. *Palpi* with the terminal joint ovate, acuminate at the apex, and nearly subulated: *head* rather large, more or less attenuated posteriorly: eyes more or less projecting: *thorax* subtransverse: *elytra* slender, generally shorter than the abdomen: *wings* large, exposed at the apex: *legs* rather long, slender.

Malthinus differs from Telephorus by several very obvious characters: the terminal joint of the palpi is ovate, acuminate, not securiform, the elytra are generally very much abbreviated, the wings large, exposed at the apex, the insects generally of minute bulk, linear-elongate, &c., and they usually prefer trees for their habitation;—there are either many species, or they are very prone to vary.

A. With the head rhomboidal; the eyes very prominent.

Sp. 1. *flaveolus*. *Flavus, vertice nigro, thorace fusco-maculato, elytris fuscis, apice rotundatis sulphureis, abdomine vix brevioribus.* (Long. corp.  $2\frac{1}{2}$  lin.)

Ca. *flaveola*. *Paykul.*—Ma. *flavus*. *Steph. Catal.* 133. No. 1351.

Yellow: the head posteriorly black, much punctate: the thorax dull flavescent, with two large fuscous spots on the disc, frequently united: the elytra fuscous, with the apex rounded, and sulphur-yellow: legs dusky-yellow: antennæ yellow, with the apex dusky.

Known from the following by its spotted thorax, brighter colour, and larger size.

Common in oaks about London, from June to August. “On oaks and among herbage in the Penllergare-woods, not common.”—

*L. W. Dillwyn, Esq.*

Sp. 2. *immunis*. *Flavus, vertice nigro, thorace immaculato, elytris subfuscis, apice rotundatis sulphureis.* (Long. corp.  $2-2\frac{1}{4}$  lin.)

Ca. *immunis*. *Marsham.*—Ma. *immunis*. *Steph. Catal.* 133. No. 1352.

Yellow: vertex black, very much attenuated, punctate: thorax bright-yellow, generally immaculate: the elytra pale fuscous, with the apex rounded and sulphureous: body beneath and legs bright-yellow: antennæ flavescent at the base, dusky at the apex.

The immaculate thorax, with other characters, distinguishes this species, which Gyllenhal gives as the male of the preceding species, but I suspect improperly.

Less abundant than the foregoing near London; found in Suffolk and Norfolk. "In woods (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 3. humeralis. *Thorace flavo medio atro, elytris fuscis, basi apiceque flavis.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Ca. humeralis. *Marsham.*—Ma. humeralis. *Steph. Catal.* 133. No. 1353.

Head yellow, posteriorly black: thorax black in the middle, with the lateral margins yellow: elytra fuscous, with a broad space at the base yellowish, and the apex of a brighter yellow: abdomen black: legs and antennæ yellow.

The black spot on the disc of the thorax is divided longitudinally.

Not uncommon within the metropolitan district, and I suspect frequent in other parts. I have received it from Bristol.

Sp. 4. luteolus. *Ochraceo-flavus, thoracis disco fusco submaculato, elytris ochraceo-flavis apice sulphureis, vertice nigricante.* (Long. corp. 2— $2\frac{1}{4}$  lin.)

Ma. luteolus. *Kirby MSS.*—*Steph. Catal.* 133. No. 1354.

Ochraceous-yellow: vertex with a narrow black fascia behind: thorax slightly clouded with fuscous on the disc: elytra pale ochraceous-yellow, with the apex bright sulphurous: body beneath, legs, and antennæ entirely bright ochraceous-yellow.

In this insect the two fuscous clouds on the thorax are placed longitudinally, one towards the centre of the anterior, and the other close to that of the posterior margin, by which it differs from the foregoing.

Found within the metropolitan district, and in Suffolk; also at Dover, and in Devonshire: not common.

Sp. 5. fasciatus. *Niger, ore thoracisque lateribus rufis, elytris punctato-striatis, fasciâ flavescente, apiceque sulphureis.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Te. fasciatus. *Olivier.*—Ma. fasciatus. *Steph. Catal.* 133. No. 1355.

Black: mouth, and a spot between the antennæ, rufescent: thorax rufous on the lateral margins, the disc glossy-black, rugulose and channelled: elytra distinctly punctate-striate fuscous-black, with a broad, pale-yellowish fascia, dilated outwardly in the middle, and a distinct round sulphurous spot at the apex: abdomen rufescent, with the apex dusky; the four anterior legs yellowish, the posterior dusky, with the tarsi and joints paler.

The punctate-striate elytra at once point out the peculiarity of this insect.

Not common, but rather widely distributed: I have taken it at Dover, and received it from Norfolk, and the New Forest, Hants. "Netley."—*Rev. F. W. Hope.*

Sp. 6. collaris. *Flavescens, antennarum apice vertice thoracis disco supero nigricantibus, elytris levibus subfuscis, basi obscuriore, apicibus flavis.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Ma. collaris. *Latreille.*—*Steph. Catal.* 133. No. 1356.

Flavescens: head behind and disc of the thorax dusky; the latter not broader than long: elytra smooth, not punctate-striate, somewhat fuscous, with the base more obscure, the apex light-yellow; the antennæ flavescens at the base, dusky at the apex.

Somewhat resembling the foregoing insect, but the elytra not punctate-striate.

Taken near London, and in Devonshire; also near Bristol

Sp. 7. biguttulus. *Niger, punctatus, ore lutescente, thorace immarginato, elytris longitudine abdominis apice acuminatis sulphureis.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

Ca. biguttulus. *Paykul.*—*Ma. biguttulus.* *Steph. Catal.* 133. No. 1357.

Black, punctate: the mouth lutescent: thorax bordered with testaceous, the sides deflexed, immarginate: elytra elongate, punctured, with two or three obsolete striæ towards the suture, obscure dusky-black, with the apex acuminate and bright sulphurous: abdomen fuscous, with the margins of the segments and the apex yellowish: femora yellow; tibiæ and tarsi dusky: antennæ fuscous, with the base yellowish beneath.

The dark elongate acuminate elytra of this insect, black thorax, and dusky tibiæ and tarsi, are its most prominent characters.

Extremely abundant on oaks, &c., from May to July, throughout the metropolitan district. “Flisk, N. B.”—*Rev. J. Fleming.*

Sp. 8. frontalis. *Niger, fronte flavâ, pedibus antennarumque basi sordidè testaceis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Ca. frontalis. *Marshall.*—*Ma. frontalis.* *Steph. Catal.* 133. No. 1358.

Head black, a little brassy; with the forehead yellow: thorax dusky, immarginate: elytra immaculate fuscous: legs and base of the antennæ dull-testaceous.

The yellow forehead distinguishes this insect from the following, and the immaculate elytra from the preceding.

Less abundant than the last near London. “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 9. immaculatus. *Niger, fronte concolore, elytris fuscescentibus immaculatis, antennis extrorsum pedibusque posticis fuscis.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Ma. immaculatus. *Kirby MSS.*—*Steph. Catal.* 133. No. 1359.

Black, with the forehead concolorous: thorax immarginate: elytra fuscescent, with the apex immaculate: antennæ dull-testaceous at the base, the apex dusky: anterior legs dull rufo-testaceous, posterior fuscous.

The black forehead and immaculate elytra, with the dark tips of the antennæ and fuscous posterior legs, distinguish this insect from its nearest allies.

Found throughout the metropolitan district, but not common. "Glanville's Wootton."—*J. C. Dale, Esq.*

Sp. 10. *Pinicola*. *Ater, immaculatus, elytris paulò dilutioribus, pedibus nigro-fuscis, antennarum basi obscure testaceo.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Ma. *Pinicola*. *Steph. Catal.* 133. No. 1360.

Immaculate-black: thorax immarginate: elytra somewhat fuscous, with the apex concolorous: all the legs fuscous-black, with the articulations somewhat paler: antennæ dull-testaceous at the base beneath, the apex fuscous. Mouth sometimes piceous.

The black head and legs of this insect distinguish it from the two preceding. The antennæ short in both sexes.

Very abundant in June, 1827, on pines and firs near Ripley.

B. With the head rounded; eyes small.

a. *Thorax subelongate.*

Sp. 11. *biguttatus*. *Niger, vertice subattenuato, thorace marginato, lævi, elytris abdomine brevioribus apice sulphureo.* (Long. corp. 2— $2\frac{1}{2}$  lin.)

Ca. *biguttata*. *Linné.—Martyn, C. pl.* 29. f. 5.—Ma. *biguttatus*. *Steph. Catal.* 134. No. 1361.

Black: head large, a little attenuated behind: thorax somewhat transverse, slightly margined; black, with the anterior and posterior edges delicately bordered with pale-testaceous or rufescent: elytra short, dusky, with the apex bright sulphur: breast black, edged with yellow: abdomen black, with the sides, apex and margins of the segments flavescent: legs fuscous-black, with the base of the femora and the joints sometimes pale: antennæ flavescent at the base beneath.

Resembles *M. biguttulus*, but the form of the head and the eyes, as well as the colouring, different.

Very abundant in woods throughout the vicinity of the metropolis, and at Dover. "In woods (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 12. *nigricollis*. *Niger, thorace submarginato, atro, elytrorum apice sulphureo, antennis pedibusque nigro-fuscis.* (Long. corp. 2— $2\frac{1}{4}$  lin.)

Ma. *nigricollis*. *Kirby MSS.—Steph. Catal.* 134. No. 1362.

Black: head broad, punctate: thorax slightly margined, the disc black, the edges very finely bordered with yellow: elytra short, fuscous, with the apex yellow: antennæ entirely and legs fuscous.

Probably a mere suffused variety of the last-described insect, from which it differs chiefly in the darkness of its hues.

Found near London, at Hertford, Dover, and in Suffolk, Hants, and Devonshire.

Sp. 13. *sanguinicollis*. *Niger, thorace lævi rufo, capitis latitudine, elytris abbreviatis apice sulphureis, tibiis pallidis.* (Long. corp. 2 lin.)

Ca. *sanguinicollis*. *Fallen?*—Ma. *sanguinicollis*. *Steph. Catal.* 134. No. 1363.

Black: thorax smooth, rufous, immaculate, slightly margined: elytra linear, rugose-punctate, much shorter than the abdomen, fuscous, with the apex sulphurous: body fuscous, with the sides, margins of the segments and the apex yellow: femora dusky-black; tibiæ and tarsi pale-yellow: antennæ flavescent at the base, black towards the apex.

The bright, immaculate, rufous thorax of this insect distinguishes it from its fellows, without taking other characters into consideration.

Found in various parts of the country; not very abundantly within the metropolitan district.

Sp. 14. *fulvicollis*. *Niger, thorace lævi fulvo, elytris abbreviatis apice flavo, pedibus antennarumque basi pallidis.* (Long. corp. 2 lin.)

Ma. *fulvicollis*. *Kirby MSS.*—*Steph. Catal.* 134. No. 1364.

Black, thorax slightly margined, fulvous, immaculate: elytra shorter than the abdomen, a little rugulose, fuscous, with the apex yellow: legs entirely and base of the antennæ pale-yellow.

Differs from the foregoing in having the thorax immaculate fulvous.

Less abundant than the last, but found in various places within the metropolitan district and in Suffolk.

Sp. 15. *minimus*. *Niger, thorace marginato, lævi, elytris abbreviatis, apice sulphureis, pedibus fuscis.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{4}$  lin.)

Ca. *minima*. *Linné.*—Ma. *minimus*. *Steph. Catal.* 134. No. 1365.

Black: head and thorax smooth, the latter margined, shining, with the anterior and posterior edges, and sometimes the lateral ones, yellow: elytra dusky, with the apex yellow: body black, with the segments delicately margined with white, the apex yellow in the male: legs black, with the base of the femora and the joints sometimes pale: antennæ entirely black.

Known from the foregoing species by having the thorax black in the centre and glossy.

Not uncommon in the neighbourhood of London.

Sp. 16. *cognatus*. *Niger, thorace submarginato, luteo-testaceo maculâ nigrâ, elytris apice flavis, antennarum basi pallido.* (Long. corp.  $2$ — $2\frac{1}{4}$  lin.)

Ma. *cognatus*. *Steph. Catal.* 134. No. 1366.

Black; forehead with a yellow spot: the thorax slightly margined, luteo-testaceous, with a central black spot: the elytra fuscous, with a small yellow spot at the apex; the antennæ pale at the base, and the legs fuscous.

Differs from *M. fulvicollis* in having the thorax with a black central spot, and the legs fuscous; and from *M. sanguinicollis* in the same characters and larger size.

Not uncommon in the vicinity of London. "Very common in the Penllergare-woods."—*L. W. Dillwyn, Esq.*

Sp. 17. *melanocephalus*. *Niger, thorace flavo, puncto atro, elytris nigris apice flavis, tibiis pallidis.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Ca. *melanocephala*. *Marsh.*—*Ma. melanocephalus.* *Steph. Catal.* 134. No. 1367.

Black: head immaculate; thorax yellow, with a central glossy black spot: elytra black, with the apex yellow: femora fuscous: tibiæ pale: antennæ pale at the base, fuscous at the apex.

The black forehead, spotted thorax, and smaller size, distinguish this from the three or four preceding insects.

Abundant on trees in the neighbourhood of London: also found near Bristol. "Common (near Swansea), principally in woods."—*L. W. Dillwyn, Esq.*

Sp. 18. *concolor*. *Niger, elytris fuscis apice concoloribus, antennarum basi tibiisque pallidioribus.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Ma. *concolor.* *Kirby MSS.*—*Steph. Catal.* 134. No. 1368.

Black: thorax glossy, immaculate: elytra dull-fuscous, linear, rather elongate, immaculate at the apex: body beneath and femora black: tibiæ and base of the antennæ dilute fuscous, or slightly pale.

The concolorous apex of the elytra, black thorax, and dark legs, well characterize this insect.

Not very common near London; more abundant in Somersetshire. "Frequent (near Swansea)."—*L. W. Dillwyn, Esq.*

b. *With the thorax transverse, very short.*

Sp. 19. *brevicollis*. *Niger, elytris pedibusque fuscis.* (Long. corp.  $\frac{3}{4}$ — $1\frac{1}{4}$  lin.)

Ca. *brevicollis.* *Paykul.*—*Ma. brevicollis.* *Steph. Catal.* 134. No. 1369.

Head black: mouth fuscous: eyes black: thorax as broad as the head; margined throughout, above depressed, shining black: elytra linear, nearly as long as the abdomen, thickly punctulate, fuscous immaculate: body fuscous, with the edges of the segments rather paler: legs fuscous.

The smallest species of the genus, and in fact of the family.

Apparently rare: my specimens were taken on "Wandsworth-common."—*Mr. Westwood.* "Woodland, Devon."—*Dr. Leach.*



FAMILY XXXVIII.—MELYRIDÆ, *Leach*.

*Antennæ* setaceous, short, the articulations for the most part cylindric-conic or turbinate, sometimes pectinate or serrated. *Palpi* not very dissimilar in length, subfiliform; *mandibles* emarginate, rather elongate and slender: *head* nutant, not so broad as, and in general inserted up to the eyes in, the *thorax*, which varies in form: *body* ovate or oblong, more or less convex: *elytra* generally as long as the abdomen, sometimes flexile: *tarsi* 5-jointed, the joints all simple.

The simple tarsi of the Melyridæ at once distinguish them from the Telephoridæ, to which may be added their short antennæ, subfiliform palpi, emarginate mandibles, convex body, &c.: most of the species are of gay and lively colours, and reside in and upon flowers, chiefly for the purpose of preying upon other insects.

The following are the indigenous genera:—

Palpi {	filiformes, apice subsetaceæ :	.	.	.	241. MALACHIUS.
	inæquales, extrorsum crassiores,	{			
	apice obliquè truncati. <i>Antennarum</i> articulis				
		brevibus :	242. APLOCNEMUS.		
		elongatis :	243. DASYTES.		

GENUS CCXLI.—MALACHIUS, *Fabricius*.

*Antennæ* filiform, shorter than the body, composed of obconic joints, in general longer than broad, and sometimes serrated. *Labium* entire at the apex or obscurely emarginate: *Palpi* filiform, subsetaceous at the apex: *head* nearly transverse, nutant, deeply inserted in the *thorax*; on each side of which, beneath the anterior angle, is a retractile rufous vesicle, and a second at the base of the abdomen.

The insects of this genus are remarkable for the singular appendages which are attached at the base of the abdomen and beneath the anterior lateral edge of the thorax; these appendages, which are mostly rufous, are capable of being alternately expanded and contracted at the will of the animal; but their exact use has not yet been ascertained: the insects are of very gay and lively colours, and are extremely voracious, subsisting upon other insects.

Sp. 1. æneus. *Æneo-viridis*, capite anticè rufo-flavescente, elytris sanguineis, basi suturâque dimidiatim æneo-viridibus. (Long. corp. 4—4 $\frac{3}{4}$  lin.)

Ca. ænea. Linné.—Don. iii. pl. 96. f. 2.—Ma. æneus. *Steph. Catal.* 134. No. 1370.

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Brassy-green, pilose: head anteriorly pale rufous-yellow; eyes brown: thorax transverse ovate, smooth, with the anterior angles obliquely sanguineous; scutellum æneous: elytra palè sanguineous, with the basal half of the suture brassy-green: the lateral vesicles sanguineous, the margins of the abdominal segments the same: legs brassy-green; antennæ black; the second and third joints produced in the males.

Very abundant throughout the metropolitan district, frequenting gardens and flowery banks. "Southend and Netley."—*Rev. F. W. Hope*. "Epping."—*Mr. Doubleday*. "Glanville's Wootton."—*J. C. Dale, Esq.* "Occasionally found on Crwmllyn and Sketty Burrows."—*L. W. Dillwyn, Esq.* "Thistles in the lane leading to Caen-wood."—*Mr. Ingpen*.

Sp. 2. *bipustulatus*. *Viridi-æneus aut cæruleus, hirtus, ore pallido, elytris apice rubris, antennarum articulo tertio brevi.* (Long. corp.  $2\frac{1}{2}$ — $3\frac{1}{2}$  lin.)

Ca. *bipustulata*. *Linne.*—*Don*. xv. pl. 528. f. 2.—*Ma. bipustulatus. Steph. Catal.* 134. No. 1371.

Green- or blue-brass; pilose; mouth broadly pale yellowish-white: thorax immaculate, or with a minute sanguineous spot on the anterior angle: elytra with an ovate blood-red spot on the inner angle of the apex: antennæ black, with the second and third joints short, simple in the females; the males with the basal joints more or less dilated.

The short third joint of the antennæ and greater bulk of the insect distinguish this species from the following, which it greatly resembles.

Found most abundantly throughout the metropolitan district, and I believe equally common in other parts. "Aiket Gate."—*T. C. Heysham, Esq.* "Epping."—*Mr. Doubleday*. "Glanville's Wootton."—*J. C. Dale, Esq.* "Very common on Crwmllyn Burrows about midsummer."—*L. W. Dillwyn, Esq.* "Southend."—*Rev. F. W. Hope*.

Sp. 3. *viridis*. *Cæruleo-virescens, hirtus, ore flavo, antennarum articulo secundo brevi, tertio longiori obconico.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{2}$  lin.)

*Ma. viridis. Fabricius.*—*Steph. Catal.* 135. No. 1372.

Blue-green, pilose, slightly æneous, sometimes violaceous: mouth yellowish or rufescent: thorax immaculate: elytra immaculate, or with a minute rufous spot at the apex within: antennæ black, with the first joint stout; the second very short; the third long, obconic; the basal joint considerably dilated in the male.

The elongate third joint of the antennæ, and nearly, or quite, immaculate elytra of this small species, exclusively of its dissimilar taint of colour, sufficiently characterize it as a species.

Somewhat rare: I have taken it at Darenth-wood, and it has occurred in other parts near London. "Cobham, Surrey, July."—*Dr. Leach*. "Baron-wood."—*T. C. Heysham, Esq.* "Near Cambridge."—*J. C. Dale, Esq.* "Mr. Jeffreys has noticed it very abundant on the flowers of *Arundo arenaria* in June."—*L. W. Dillwyn, Esq.*

Sp. 4. *marginellus*. *Viridis aut cæruleus, thoracis lateribus elytrorumque apicibus rufo-fulvis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Ma. *marginellus*. *Fabricius*.—*Steph. Catal.* 135. No. 1373.—*Ma. bispinosus. Curtis, iv. pl.* 167. ♂.

Green or bluish, pubescent: head flavescent in front: thorax with its lateral margins pale sanguineous: elytra with an ovate pale sanguineous spot at the apex within: legs and antennæ dull green, the latter with several of the basal joints dilated in the male, which sex has an acuminate tubercular process on the spot at the inner apex of the elytra, concolorous therewith.

No doubt can exist of the insect last referred to being the male of *M. marginellus*, Messrs. Chant and Bentley having taken several pairs *in copull*, while in Devonshire; and who remarked that their voracity was so inordinate, that if a pair were confined in a box for a single night, one only remained alive in the morning, the fragments of its partner being strewed about.

Found chiefly on the coasts, and on those of Norfolk, Suffolk, Essex, Kent, and Devonshire, it has occurred. "Southend."—*Rev. F. W. Hope*. "Borders of Slapton Ley, Devon."—*Messrs. Chant and Bentley*.

Sp. 5. *bituberculatus*. *Nigro-æneus, glaber, elytris fuscis, fasciâ mediâ abbreviatâ apiceque flavis, in ipso apice tuberculis duabus atris.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Ma. *bituberculatus*. *Steph. Catal.* 135. No. 1382.

Black-brass, glabrous; mouth flavescent: thorax immaculate: elytra fuscous, or black, with a transverse fascia a little before the middle, not reaching to the suture, and the apex yellow or rufescent, the latter with two black tubercular processes.

The tubercular processes at the apex of the elytra distinguish this insect from the following: I possess the sexes of each; the above is therefore not a sexual distinction.

Not very common: found in the vicinity of London, at Hertford, Darenth, Coombe, &c., in hedges.

Sp. 6. *fasciatus*. *Nigro-æneus, glaber, elytris nigris, fasciâ mediâ abbreviatâ, apiceque simplice rufis.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

*Ca. fasciata.* Linné.—Don. xv. pl. 528. f. 1.—Ma. fasciatus. Steph. Catal. 135. No. 1381.

Black-brass, glabrous: mouth rufescent: thorax immaculate: elytra with a transverse fascia a little before the middle, not extending to the suture, and the apex itself pale rufous: body and legs æneous, the former with the margins of the segments pale rufous.

The absence of the tubercles at the apex of the elytra at once point out the distinction of this from the preceding species.

Very common in June, in certain situations near the metropolis, especially in a lane at Darenth. “Rose Castle.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.* “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 7. sanguinolentus. *Lineari-elongatus, glaber, nigro-æneus, thoracis lateribus, elytrisque totis rubris.* (Long. corp.  $2-2\frac{1}{2}$  lin.)

Ma. sanguinolentus. Fabricius.—Steph. Catal. 135. No. 1374.

Linear-elongate, glabrous: green or black-brass; mouth concolorous: thorax with the lateral margins broadly rufous: elytra smooth, entirely pale blood-red, sometimes with a fuscous cloud towards the scutellum: body beneath, legs, and antennæ brassy-black.

Known by its totally rufous elytra.

Rare near London: it has been taken on barley at Ealing; but it appears to be more abundant on the borders of Whittlesea-mere and its vicinity. “Yaxley-mere.”—*Mr. Standish.* “On aquatic plants, on Crwmllyn Bog, not common.”—*L. W. Dillwyn, Esq.*

Sp. 8. ruficollis. *Æneo-niger, thorace toto, elytrorumque apice pallide rufis, tibiis tarsisque pallidis.* (Long. corp.  $1\frac{1}{2}-1\frac{3}{4}$  lin.)

Ma. ruficollis. Fabricius.—Steph. Catal. 135. No. 1375.

Brassy-black, glabrous: mouth rufescent: thorax entirely pale rufous: elytra greenish-brass at the base, the apical half pale rufous, this last colour produced in an acute angle towards the centre of the disc: abdomen rufous at the base, the apex æneous, with the margins of the segments rufous: femora dark æneous; tibiæ and tarsi pale rufous, the latter black at the apex.

The first examples I saw of this elegant species were taken by Messrs. Chant and Bentley, at Whittlesea, in June; it was afterwards found by Messrs. Dale and Weaver, in the same locality.

+Sp. 9. thoracicus. *Cæruleo-ater, thorace toto tibiisque posticis rufis, elytris immaculatis.* (Long. corp.  $1\frac{3}{4}$  lin.)

Ma. thoracicus. Fabricius.—Steph. Catal. 135. No. 1376.

Blue-black; glabrous: the thorax entirely rufous; elytra immaculate; posterior tibiæ pale rufous.

Known by its immaculate elytra and totally rufous thorax.

In the collection at the British Museum. "New Forest."—*Dr. Leach*.

Sp. 10. *rubricollis*. *Niger, hirtus, ore albido, thorace toto, elytrorumque apice pallidè rufis, elytris nigro-cæruleis, pedibus nigris*. (Long. corp.  $1-1\frac{3}{4}$  lin.)

*Ca. rubricollis*. *Marsham*.—*Ma. rubricollis*. *Steph. Catal.* 135. No. 1377.

Black, pilose: mouth whitish or rufescent: thorax entirely rufous: elytra blue-black, with a minute rufous spot at the apex within: abdomen with the margins of the segments rufescent: legs totally black. Male with the apex of the elytra truncate obliquely from the margin to the suture.

The small rufous spot at the apex of the elytra, and the totally rufous thorax and black legs, distinguish this species.

I have found this in the utmost profusion on grass by the roadside, near Hertford; and also somewhat plentifully in other parts within the metropolitan district. "Bristol."—*J. C. Dale, Esq.*

Sp. 11. *pulicarius*. *Obscurè viridi-æneus, ore albido, thoracis lateribus rubris, elytris pubescentibus, apice luteo-rufis*. (Long. corp.  $1\frac{1}{2}-2$  lin.)

*Ma. pulicarius*: *Fabricius*.—*Steph. Catal.* 135. No. 1378.

Dull brassy-green: mouth whitish or flavescent: thorax with its lateral margins pale rufous: elytra pubescent, with the apex of a luteous-red; abdomen with the margins of the segments slightly margined with flavescent: legs greenish: tarsi, especially the anterior, pale: antennæ pale, with a black line above. Male with the apex of the elytra obliquely excised.

Differs from the foregoing by having the disc of the thorax black, and the antennæ pale beneath.

Not very common, the only localities I know being on the banks of a lane near Peckham, and in the Kent-road, near the Surrey Canal Bridge. "Gardens, Walworth."—*Mr. Ingpen*.

Sp. 13. *productus*.—PLATE XIX. f. 3, ♀.—*Niger nitidus, antennarum basi, elytrorum apice pedibusque flavis, femoribus basi nigris*. (Long. corp.  $1-1\frac{1}{2}$  lin.)

† Sp. 12. *pedicularius*. *Ater, thorace marginato, immaculato, elytrorum apice rufi, antennis filiformibus*.

*Ma. pedicularius*. *Olivier*.—*Turton (!)*—*Steph. Catal.* 135. No. 1379. note.

Black; thorax margined, immaculate: elytra tipped with red: antennæ filiform. *Turton* indicates this as British, but I have never seen a specimen.

*Ma. productus.* *Olivier.—Steph. Catal. 135. No. 1380.*

Glossy-black: thorax immaculate: elytra rather broader than the thorax, convex, finely punctured, with a broad yellow or luteous spot at the apex within: abdomen with the segments slightly edged with yellowish: the four anterior legs yellow, with the base of the femora black: the posterior black in the male, with the apex of the tibiæ and tarsi pale; flavescent in the female, with the femora black. Male with the apex of the elytra retuse, with a black spine near the suture.

The totally dark thorax and minute reddish spot at the apex of the elytra sufficiently distinguish this species.

Very rare: the specimens in the British Museum and in my own collection are the only examples I have seen. “Bristol, Devonshire, and Windsor.”—*Dr. Leach.*

† *Sp. 14. equestris. Viridi-æneus, elytris rubris maculâ scutellari, fasciâque obliquè pone medium æneis, femoribus rufis.* (Long. corp. 2 lin.)

*Ma. equestris. Fabricius. Steph. Catal. 136. No. 1383.*

Brassy-green: thorax immaculate: elytra bright rufous, with a triangular spot at the base, and an oblique fascia a little behind the middle, æneous-black: femora rufous; tibiæ and tarsi æneous.

Resembling *M. fasciatus*, near which it ought most probably to be placed, but differs in having the elytra rufous, with a small spot at the base, and a fascia behind the middle, brassy; the femora rufous; thorax æneous, &c.

Found near “Bristol.”—*Dr. Leach.*

† *Sp. 15. humeralis. Viridi-æneus, elytris basi rubris apice æneis.* (Long. corp.  $1\frac{3}{4}$  lin.)

*Ma. humeralis. Leach MSS.—Steph. Catal. 136. No. 1384.*

Brassy-green: elytra rufous at the base, æneous at the apex.

Allied to the last, but the elytra immaculate at the apex.

In the collection at the British Museum: of its locality I am not aware.

## GENUS CCXLII.—*APLOCNEMUS*\*, *mili*.

*Antennæ* abbreviated, composed of transverse articulations, of which the basal one is slightly robust; the second and third short, nodose; the remainder, to

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\* Bessers' MSS.? name, *Elicopis*, is too closely allied to *Hellicopis* of the *Systema Glossatorum* of Fabricius, published in the sixth volume of Illiger's Magazine, to be retained. I have therefore been compelled to substitute the present appellation, from *Ἀπλοοῖ*; simplex; *νημεν*, tibiæ.

the tenth, of nearly equal length, obconic, more or less produced internally, the apical one longest, ovate. *Palpi* with the terminal joint somewhat acute: *body* obtuse, somewhat oblong; slightly pilose: *elytra* dilated behind the middle, rather obtuse posteriorly; the apex closed: *legs* short; *tarsi* simple.

The more glabrous and broader body of the insects comprised in this genus, with the brevity and stoutness of the articulations of the antennæ, less incrassated palpi, and stouter legs, point out a few of the more obvious external distinctions between this and the following genus; the typical species (*Ap. impressus*) resides beneath the bark of trees.

Sp. 1. *impressus*. *Nigro-æneus, villosus, punctis numerossissimus griseis impressis, tibiis testaceis, annulo nigro, antennarum basi testaceo.* (Long. corp.  $2\frac{1}{2}$ — $2\frac{3}{4}$  lin.)

Cr. *impressus*. *Marsham.*—El. *impressus*. *Steph. Catal.* 136. No. 1385.

Entirely of a black-brassy, clothed with a pale flavescent pile: thorax very convex, punctate: elytra more coarsely punctate, the punctures somewhat confluent and irregularly placed: the two or three basal joints of the antennæ pale testaceous: femora æneous; tibiæ black, with the base and apex pale; tarsi pale beneath.

The tibiæ and tarsi are sometimes entirely pale testaceous: An. El. femoralis.—*Steph. Catal.* 136. No. 1386.?

Not common: found beneath the bark of elms in the vicinity of London, and in other places. “Copenhagen-fields.”—*A. Cooper, Esq.* “New Forest, and Glanville’s Wootton.”—*J. C. Dale, Esq.* “Elms in Copenhagen-fields and Hyde-park, in the spring.”—*Mr. Ingpen.*

† Sp. 2. *floralis*? *Ater, villosus, immaculatus, antennis pedibusque concoloribus.* (Long. corp. 2 lin.)

Da. *floralis*. *Olivier. ii. pl. iii. f. 13. a. b.*?

Deep black, slightly clothed with a fuscous pile: thorax finely punctured, with a fovea on each side towards the base; and a longitudinal sulcus parallel with the lateral margins: elytra somewhat rugose transversely, with two or three obsolete longitudinal striæ: legs and antennæ deep black.

This species, apparently the *Da. floralis* of Olivier, was captured “in June last, at Petworth.”—*Mr. Westwood.*

‡ Sp. 3. *quadripustulatus*. *Ater, hirtus, elytris maculis duabus rufis.* (Long. corp. 2 lin.)

Da. 4-punctulatus. *Fabricius*.—El. 4-punctulatus. *Steph. Catal.* 136. No. 1387.—Var. ? El. apicalis. *Steph. Catal. l. c.* 1388.

Black, hairy; the elytra with two red spots, one at the base, the other towards the apex; the apical one sometimes wanting.

In the British Museum are specimens of this insect, said to have been taken by Dr. Leach, in Devonshire, about four years since.

### GENUS CCXLIII.—DASYTES, *Paykul*.

*Antennæ* composed of somewhat elongate joints, of which the basal one is considerably incrassated; the second minute, nodose; the third somewhat longer; the fourth to the tenth gradually increasing, and frequently produced within, forming a serrated edge; the terminal one longer, ovate. *Palpi* with the terminal joint truncate at the apex: *body* more or less elongate, very pilose: *elytra* more or less linear, rarely dilated posteriorly, the apex dehiscent: *legs* long; *tarsi* simple: *claws* with a membranous process beneath.

The more elongate and densely pilose body of the true *Dasytes*, combined with the dissimilarity in the form of the antennæ and palpi, and the propensities of the insects to inhabit flowers, form the chief distinctions of this genus from *Aplocnemus*:—but the genus evidently requires greater subdivisions, at least the first and last species being alien thereto—the first, from the remarkable posterior tibiæ and appendages at the base of the tarsi, I would propose calling *ENICOPUS*; and the latter, from its filiform shape, acute squamous elytra, &c. might be termed *DOLICHOSOMA*.

‡ Sp. 1. *ater. Oblongus, niger, vagè punctatus, hirtus pilis nigris et cinereis.*  
(Long. corp.  $3\frac{1}{2}$  lin.)

Da. *ater. Fabricius*.—*Steph. Catal.* 136. No. 1390.

Oblong, black, with deep dispersed punctures, somewhat disposed in striæ on the elytra; clothed with long black and cinereous hairs: the head in front with an ovate rugulose double impression: one sex has an elongate, incurved spine at the base of the first joint of the tarsi, and the posterior tibiæ are considerably incrassated and bent.

This singular insect doubtless belongs to a distinct genus from its allies, but I have not ventured to detach it therefrom, other than as above mentioned.

Said to have been captured by Dr. Leach, in Devonshire: specimens are in the British Museum indigenous collection.



† Sp. 2. *niger*. *Oblongus, niger, hirtus, tenuè punctulatus, thorace utrinque impresso, antennis obtusè serratis.* (Long. corp. 2 lin.)

De. *niger*. Linné. Da. *niger*.—*Steph. Catal.* 136. No. 1389.

Oblong, black; clothed with rather short erect fuscous hairs; finely punctured throughout: forehead flat, with three impressed foveæ: thorax with an impression on each side; with a longitudinal sulcus on the lateral margin: antennæ obtusely serrated. Male smaller, with the head rather broader, and the antennæ somewhat longer than in the female.

Rare: it has been taken near “Windsor.”—*Dr. Leach*.

Sp. 3. *cæruleus*. *Elongatus, hirtus, suprâ cæruleus aut viridis, thorace profundius parçè punctato, elytris apice rotundatis, antennis nigris.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Da. *cæruleus*. Fabricius.—*Steph. Catal.* 136. No. 1391.

Elongate, hairy; above blue or green: thorax rather deeply sprinkled with punctures, the lateral and hinder margins rounded: elytra rounded at the tip, linear-elongate, thickly and obsoletely rugose-punctate: legs elongate, bluish-black: antennæ black, with the six terminal joints elongate in the male, slightly serrated in the female; the elytra in the latter sex a little dilated.

Extremely variable in colour; every tint of blue and green—the latter frequently glossed with æneous—occurring.

Not uncommon on flowers on the Hampshire coast, and in those of the adjoining counties. “On flowers, Barton Cliff, and Christchurch, Herne Bay.”—*J. C. Dale, Esq.*

Sp. 4. *viridis*. *Elongatus, hirtus, suprâ viridis, thorace creberrimè punctato, posterius angustiori, angulato, elytris apice acuminatis.* (Long. corp. 3 lin.)

La. *viridis*. Rossi.—Da. *viridis*.—*Steph. Catal.* 136. No. 1392.

Elongate, hairy: above rich green: the thorax thickly and rather deeply punctate, attenuated and angulated posteriorly: elytra elongate, linear, acuminate at the apex, somewhat deeply rugose-punctate: legs very long, black, tinted with æneous: antennæ brassy-green.

The angulated posterior margins of the thorax, and its attenuation behind, with the acuminate elytra and bright-green colour of the insect, distinguish it from the preceding; and to the following—to which it has been referred—its differences are too evident to require pointing out.

Very rare: the only examples I have seen were captured by the late Mr. Cranch, in Cornwall.

Sp. 5. *æreatus*. *Elongatus, nigro-æneus, pubescens, thorace subcylindrico, elytris punctatissimis, pedibus nigris.* (Long. corp.  $2-2\frac{1}{4}$  lin.)

*Da. æratus.* Steph. *Catal.* 136. No. 1393.

Elongate, brassy- or bluish-black, pilose; finely punctured: forehead slightly depressed: elytra elongate, dilated towards the apex, which is somewhat obtuse: body glossy black beneath: legs and antennæ also black, the latter slightly serrated in the males.

Broader, and of a brighter æneous hue, with the antennæ in both sexes more slender than in the following insect.

Not very uncommon in hedges amongst nettles in the vicinity of London. “Glanville’s Wootton, on apple-blossoms.”—*J. C. Dale, Esq.* “Kew.”—*Rev. T. T. Haverfield.* “Sketty Burrows, and occasionally on willows.”—*L. W. Dillwyn, Esq.*

Sp. 6. *serricornis.* *Lineari-elongatus, nigro-æneus, subpubescens, thorace subtransverso, pedibus antennisque atris, his extrorsum serratis.* (Long. corp. 2 lin.)

*Da. serricornis.* Kirby MSS.—Steph. *Catal.* 137. No. 1394.

Linear-elongate, deep brassy-black, pubescent; finely punctured: head broad; forehead depressed, rugose: thorax somewhat transverse: elytra linear-oblong, flexile, slightly punctate: legs and antennæ entirely black, the latter strongly serrated towards the apex. Tibiæ sometimes fuscous.

More elongate, of a deeper hue, and the antennæ more acutely serrated than in *Da. æratus.*

Found near London, and in Suffolk, but not common.

Sp. 7. *flavipes.* *Lineari-elongatus, nigro-virescens, hirtus, tenuè punctulatus, antennarum basi tibiisque testaceis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

*Me. flavipes.* Olivier.—*Da. flavipes.* Steph. *Catal.* 137. No. 1395.

Linear-elongate, greenish-black; pubescent, delicately punctured: forehead impressed: thorax with the lateral and hinder margins rounded: elytra elongate, flexile, finely punctured: body black: first pair of legs nearly all testaceous, posterior black, with the tibiæ alone testaceous: antennæ black, with two or three of the basal joints testaceous.

Distinguished from the two preceding species, by having the base of the antennæ and the tibiæ testaceous.

Common from June to August, in thick hedges, within the metropolitan district. “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Swansea, not unfrequently found among herbage.”—*L. W. Dillwyn, Esq.*

Sp. 8. *linearis.* PLATE XIX. f. 4.—*Filiformi-elongatus, pallidè virèscens, opacus, punctatissimus, abdomine lineari æneo-nitido.* (Long. corp.  $2-2\frac{3}{4}$  lin.)

*Da. linearis.* Fabricius.—Steph. *Catal.* 137. No. 1396.

Very slender, filiform, elongate; opaque, pale greenish; very thickly punctured, and slightly clothed with a pale pubescence: forehead foveolated: thorax elongate, with an obsolete dorsal channel: elytra very long, linear, very obsoletely striated, the apex acuminate, gaping: body beneath glossy-æneous: legs black; femora tinted with æneous: antennæ black, with the second joint testaceous.

The very slender form of this insect, combined with the dissimilarity in the structure of the antennæ, the second joint of which is short, globose; the remainder more or less elongate, obconic, and slightly produced within, with the terminal one larger and fusiform, with the very slightly pubescent, or rather squamous, surface, point out its claim to be distinguished as a genus, as before mentioned:—it has considerable resemblance in external form to *Lymexylon navale*.

So far as I am aware, the only indigenous examples of this pretty species have been found as below: it is a maritime insect. “Wrabness, Essex.”—The late *Rev. R. Sheppard*. “Deal, in June, 1829; and Southend, in June, 1830.”—*Rev. F. W. Hope*.

#### FAMILY XXXIX.—TILLIDÆ, *Leach*.

*Antennæ* subclavate, with the three or four terminal joints, especially the last, incrassated: *head* inflexed, retractile within the thorax to the *eyes*, which last are frequently lunate: *thorax* elongate, subcylindric, or subcordate: *body* elongate, subcylindric: *tarsi* five-jointed, the penultimate joint always bifid.

The insects of this family are in general extremely beautiful, and either reside in rotten wood, or in the nearly dried remains of animals, but their larvæ are for the most part, so far as known, carnivorous: they may be known with facility from the foregoing, by having their antennæ more or less incrassated towards the apex, the latter being generally subclavate, the penultimate joint of the tarsi bifid, &c.

The subjoined are the genera which have hitherto occurred in Britain:

Tarsi art <sup>o</sup> . prim <sup>o</sup>	{	haud brevissimo. <i>Antennæ</i>	{	subfiliformes: . . .	244. TILLUS.
			{	art <sup>is</sup> . 3s. ultimis sensim crassioribus: . . .	246. THANASIMUS.
	{	brevissimo.	{	securiformi: . . . . .	245. OPILUS.
Palpi maxillares art <sup>o</sup> . ultimo	{	crassiore, obconico; labiales eodem art <sup>o</sup> .	{	securiformi: . . .	247. CLERUS.
			{	obconico. { magno, Antennarum { quadrato: 248. NECROBIA. art <sup>o</sup> . ult <sup>o</sup> , { rotundato: 249. CORYNETES.	

GENUS CCXLIV.—TILLUS, *Olivier.*

*Antennæ* serrate, scarcely longer than the thorax, the second joint short, globose, or ovate, the remainder short, with the terminal one oblong, acuminate. *Palpi* unequal, the *maxillary* filiform, the *labial* securiform: *head* and *thorax* rather narrower than the abdomen, the former rounded: *eyes* sublunate: *thorax* subcylindric, or a little attenuated behind: *body* elongate, subcylindric: *legs* rather short; *tarsi* distinctly five-jointed.

The serrated, subfiliform antennæ, distinctly five-jointed tarsi, elongate, subcylindric body, and filiform maxillary palpi united, are the principal points of distinction between this genus and the others of this family. The larvæ feed on decayed wood, and the imago is found in flowers and on trees.

## A. With the thorax cylindric.

Sp. 1. *elongatus*. *Villosus, ater, thorace rubro.* (Long. corp.  $2\frac{1}{2}$ —4 lin.)

Chr. *elongata*. *Linné.*—Ti. *elongatus*. *Steph. Catal.* 137. No. 1398.

Villose: head black: thorax slightly narrowed behind, glossy red, with a narrow black anterior border: elytra deep bluish- or purplish-black, faintly punctate-striate: antennæ and legs black.

It varies much in size, and immature specimens have a pale testaceous spot in the centre of each elytron.

Not uncommon, in some years, in the lane leading from Darent-green to the wood, in June; also found at Coombe-wood, and near Hertford, and in Hants and Suffolk. “Windsor.”—*Dr. Leach*. “Camberwell.”—*Rev. Professor Henslow*. “Baronwood.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday*. “Bessell’s Green, Kent.”—*Mr. Ingpen*.

Sp. 2. *ambulans*. *Villosus, ater, thorace concolore.* (Long. corp. 3—4 lin.)

Ti. *ambulans*. *Fabricius.*—*Steph. Catal.* 137. No. 1399. Var. Ti. *bimaculatus*.—*Don. xii. pl.* 411. f. 2.

Villose, black; thorax elongate, narrowed behind, glossy black: elytra deep black, punctate, the punctures disposed in striæ: antennæ and legs also black.

This also varies in bulk, and in having a pale rufescent or testaceous spot in the middle of each elytron: this last has been given as a species by Donovan, as above cited.

Not so common as the last, and but rarely found near London: it has occurred in Devonshire and in Suffolk. “Hereford.”—*Rev.*

*Professor Henslow.* "Sometimes plentiful early in summer, about the borders of Cline-wood, and at Penllergare."—*L. W. Dillwyn, Esq.*

B. With the thorax subcordate.

Sp. 3. *unifasciatus.* *Ater, pilosus, elytris fasciâ incurvâ pone medium albâ, basi rufis.* (Long. corp. 3—3½ lin.)

El. *unifasciatus.* *Olivier.*—Ti. *unifasciatus.* *Steph. Catal.* 137. No. 1400.—*Curtis, vii. pl.* 267.

Pilose, black: elytra punctate-striate, with the base rufous, the apex black, with an incurved white fascia a little behind the middle, frequently abbreviated towards the suture: antennæ and legs black.

I once met with three fine specimens of this beautiful insect on some new oak paling, at Hertford, in June; and saw others, but was unable to secure them from their great activity: it has also been taken not unfrequently near Windsor.

GENUS CCXLV.—OPILUS, *Latreille.*

*Antennæ* pilose, clavate: the second joint short; the six following elongate; the remainder forming the club, of which the basal joint is elongate obtrigonal, the others shorter; the terminal one being obliquely acuminate. *Palpi* with the terminal joint large, securiform: *head* as broad as the *thorax*, which is conic-cylindric, with the base slightly attenuated: *body* elongate: *tarsi* indistinctly five-jointed, the basal joint being minute and concealed above by the apex of the tibiæ.

The elongated intermediate joints of the antennæ, which are gradually incrassated from the base to the apex, the securiform terminal joint of all the palpi, and simple eyes, are the principal distinctions of this genus: the larvæ and imago are both found beneath the bark of trees, and occasionally feed upon other insects in the imperfect states.

Sp. 1. *mollis.* *Elongatus, pubescens, fuscus, elytris fasciis duabus apiceque pallidis, abdomine rufescente.* (Long. corp. 3—5 lin.)

At. *mollis.* *Linné.*—Op. *mollis.* *Samouelle, pl.* 12. f. 1.—*Steph. Catal.* 138. No. 1401.

Elongate, pubescent, fuscous: head testaceous in front: thorax with its anterior edge testaceous: elytra with an irregular oblique pale fascia at the base, another transverse angulated distinct one a little behind the middle, and abbreviated towards the suture; and the apex also pale: breast piceous: ab-

domen reddish: legs elongate pale testaceous: the femora with a fuscous ring near the apex: antennæ pale ferruginous.

The fasciæ on the elytra vary much: in one of my specimens they are subdivided into several small patches, and in another the anterior one is prolonged down the suture, and becomes confluent with the inner end of the posterior one.

Found occasionally in the fields to the north of London; and I have captured two or three specimens at Coombe-wood, and several at Darenth, in hedges, in June. “Windsor.”—*Dr. Leach*. “On an old oak, Holloway.”—*A. Cooper, Esq.* “Kew, under the bark of trees.”—*Rev. T. T. Haverfield*.

Sp. 2. *fasciatus*. *Ater, villosus, elytris fasciâ pone medium albâ, antennarum basi tibiis tarsisque ferrugineis.* (Long. corp.  $2\frac{1}{2}$ —3 lin.)

Op. *fasciatus*. *Wilkin MSS.*—*Steph. Catal.* 138. No. 1402.—*Curtis*, vi. pl. 270.

Fuscous-black, villose: head thickly punctured: thorax deeply punctured, with a finely punctate, rather deep, sulcus down the back: elytra very coarsely punctured, the punctures sub-confluent, with a transverse whitish or pale ochraceous fascia a little behind the middle; legs ferruginous, with the base of the femora black: antennæ pale ferruginous at the base, dusky towards the tip.

The fascia on the elytra varies a little in colour and form; in my specimen it is white and straight: and the thorax, which has been described from a drawing, has a deep dorsal punctate sulcus, and is not smooth, down the centre.

Three specimens only have been taken of this pretty insect, of which two were captured in the woods near Winchmore-hill, by Mr. Shillingford.

#### GENUS CCXLVI.—*THANASIMUS*, *Latreille*.

*Antennæ* submoniliform, the basal joints subcylindric; the seventh to the tenth turbinate; the terminal one ovate, large, obliquely acuminate; the three last forming a triarticulate club. *Palpi*, maxillary filiform; *labial* with the terminal joint clavate, securiform: *head* as broad as the *thorax*, which is subcordate; *tarsi* distinctly five-jointed.

*Thanasimus* agrees with *Tillus* in having the tarsi distinctly five-jointed, but differs in the antennæ being distinctly clavate, and not serrated; and from the rest of the family by the former characters, exclusively of other less obvious distinctions. They frequent rotten, or fresh cut, trees.

Sp. 1. *formicarius*. *Pilosus, rufus, capite pedibusque nigris, elytris nigris basi rufis fasciisque duabus albis.* (Long. corp. 3—4½ lin.)

At. *formicarius*. *Linné*.—*Don*. vii. pl. 271. f. 2.—*Op. formicarius*. *Steph. Catal.* 138. No. 1403.

Pilose; rufous: head black: thorax rufous, with the anterior margin black: elytra rufous at the base, the rest black, with two transverse snowy-white villose fasciæ, the anterior one slender and flexuous before the middle, the other broad, and more or less angulated anteriorly behind the middle: legs black: tarsi piceous: antennæ piceous black, the terminal joint of the latter ferruginous at the tip.

With the thorax beneath and breast black:—this variety appears rare.

Not common: I have taken it at Coombe-wood, in April; and I believe it has been captured in other places in its vicinity, in June: it is said to be partial to trees of the fir kind. “Windsor.”—*Dr. Leach*. “Southend.”—*Rev. F. W. Hope*. “Glanville’s Wootton, on the trunk of a Scotch fir.”—*J. C. Dale, Esq.* “Dublin.”—*Rev. J. Bulwer*. “Copenhagen-fields.”—*Mr. Ingpen*.

#### GENUS CCXLVII.—CLERUS, *Geoffroy*.

*Antennæ* slender, and submoniliform at the base; the three terminal joints abruptly larger, and forming an obtriangular club, the apical joint of which is very large, rounded and acuminate on the inner edge. *Palpi*, maxillary filiform: labial short, securiform: *eyes* notched: *thorax* conic-cylindric: *tarsi* indistinctly five-jointed, the basal joint being minute, and not visible from above.

The insects of this beautiful genus are distinguished by having the three terminal joints of the antennæ incrassated, and the last with an acumination within, by the eyes being notched, the maxillary palpi having the terminal joint obconic, and the labial ones securiform.

The larvæ inhabit the nidi of bees, to which useful insect they are very destructive: the perfect insect is found on flowers.

Sp. 1. *apiarius*.—PLATE XIX. f. 5.—*Cyaneus, elytris rubris, fasciis tribus cærulescentibus, tertiâ terminali.* (Long. corp. 4—8 lin.)

At. *apiarius*. *Linné*.—*El. apiarius*. *Steph. Catal.* 138. No. 1404.

Deep blue; slightly pubescent: head and thorax immaculate: elytra red, with three bluish fasciæ; the first narrowed before the middle, the second broad behind the middle, and the third at the apex: legs bluish-black, with the tarsi rufescent: antennæ ferruginous at the base, the apex dusky or black.

The larvæ is of a beautiful red, furnished with six scaly legs and two points at

the extremity of the abdomen: it inhabits the hive of the honey bee, to which it is very destructive, devouring the larva of the bee in the cell in which it is first born, and proceeding from cell to cell, until arrived at maturity, successively destroying its inhabitant: but fortunately the insect is rare in England.

I was present at Coombe-wood, near Dover, in June, when Mr. Stone beat a specimen of this elegant insect out of a hawthorn bush, but which escaped; but a second example was subsequently taken near the same spot and forwarded to him, and which is now in the collection of Mr. Bentley: the insect has also been taken in Norfolk, and near Manchester.

†Sp. 2. *alvearius*. *Hirtus, cyaneus, elytris rufis, maculâ communi fasciisque tribus nigris tertiâ abbreviatâ.* (Long. corp. 5—8 lin.)

Cl. *alvearius*. *Fabricius*.—*Curtis*, i. pl. 64. *Steph. Catal.* 138. No. 1405.

Deep bluish-black, very hairy; head and thorax immaculate: elytra rufous, with a spot at the scutellum, a transverse fascia united thereto at the suture, a little before the middle; a second broader, behind the middle; and a third abbreviated one within the apex, deep bluish-black: legs and antennæ blue-black.

Latreille says that this insect is attached to the nidus of *Osmia cornuta* (Syst. Catal. No. 5053); and that its larva resembles that of the foregoing species, but has a bluish spot on the scutellum.

This insect is also said to have been taken near Manchester, but a most magnificent specimen is in the collection of Mr. Chant, which was “taken near Dorking, in June.”—*Mr. Waterhouse*.

## GENUS CCXLVIII.—NECROBIA, *Olivier*.

*Antennæ* moderate, slender at the base, the first joint rather large, clavate; the second subglobose; the third slightly elongated; the five following shorter, subnodose; the remainder forming an obtrigonal club, of which the terminal joint is very large and subquadrate, and the two basal ones transverse. *Palpi* unequal, subfiliform; the terminal joint somewhat fusiform: *head* small, rounded: *thorax* subquadrate, a little dilated in the middle, slightly margined.

The genus *Necrobia*—of which the species, as the name imports, reside in dead bodies, or in decaying or dried animal substances—may be readily known from *Corynetes*, by the magnitude of the terminal joint of the antennæ, which is about as long, and somewhat broader, than the two preceding united, and nearly quadrate, with the angles rounded; the antennæ are rather shorter, and the



second joint subglobose: the thorax and head are different in form.

Sp. 1. violacea. *Violaceo-cærulea aut cæruleo-viridis, pedibus subconcoloribus, antennis nigris, elytris punctatis; punctis in lineas digestis.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

Ne. violacea. Olivier.—*Steph. Catal.* 131. No. 1406.

Deep violet blue, or blue-green; villose: antennæ black: thorax very thickly punctate: elytra rather deeply punctate, the punctures disposed in rows: body beneath obscure deep blue: legs nearly of the same hue.

Colour and size very variable: the broad truncate club of the antennæ distinguishes this insect from *Corynetes violacea*, which it greatly resembles.

Far from uncommon in dried bones, in dead carcasses, and skins, throughout the metropolitan district. “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Common in carrion (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 2. ruficollis. *Capite elytrisque intensivè cæruleis, thorace, elytrorum basi pedibusque rufis, antennis abdomineque nigris.* (Long. corp.  $2$ — $2\frac{3}{4}$  lin.)

Ne. ruficollis. Olivier.—*Steph. Catal.* 138. No. 1407.

Villose; cyaneous: head and thorax deeply punctate; the latter, and base of the elytra, and legs rufous: elytra punctate-striated: abdomen and antennæ black.

Not uncommon in several parts of the metropolitan district, especially in and about London itself; also plentiful at Hertford, Ripley, Dover, &c. “Bristol.”—*G. Waring, Esq.* “Copenhagen-fields.”—*A. Cooper, Esq.* “Epping.”—*Mr. Doubleday.* “In plenty on the walls of the Penitentiary\*, Millbank, in August, 1829.”—*S. Saunders, Esq.*

Sp. 3. rufipes. *Cærulea, antennarum basi pedibusque rufis, elytris subpunctatis.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{4}$  lin.)

Ne. rufipes. Olivier.—*Steph. Catal.* 138. No. 1408.

\* Every entomologist must rejoice at the propensity of this insect to frequent prisons, as they owe the preservation of the life of the celebrated Latreille to the appearance of one of these insects during his incarceration, at the period of the revolutionary troubles in France, thirty years since, as fully detailed by him in his *Histoire Naturelle des Crust.*, &c.

Deep blue; pilose: thorax finely punctured: elytra delicately shagreened: legs totally rufous: antennæ black, with the base rufous.

Rare: a few specimens only having been captured within the metropolitan district, though in certain years it has been rather abundant. “At the bottom of Maiden-lane, Copenhagen-fields, in plenty, October, 1816.”—*J. E. Gray, Esq.* “Epping.”—*Mr. Doubleday.*

### GENUS CCXLIX.—CORYNETES, *Paykul*?

*Antennæ* rather long; the basal joint elongate, incrassated, and slightly bent; the second subconic; third and fourth elongate, a little tumid; four following short; the remainder forming a rather slender club, of which the two basal joints are longest, and the terminal one is rounded, and slightly produced within at the apex. *Palpi* with the terminal joint obconic: *head* broad, transverse: *thorax* with the sides emarginated, longer than broad.

Known from *Necrobia*—with which genus it has been apparently confounded by all continental writers—by having the antennæ elongate, the terminal joint subglobose and shorter than the two preceding, which are broader than it, the second joint subconic, and the third and fourth longer than the four following: the only species chiefly inhabits hedges and flowers, but whether for the purpose of preying upon other insects I am not aware.

Sp. 1. violaceus. *Violaceo-sub-virescens, nitidus, fusco-villosus, antennis nigris, pedibus fusco-virescentibus, elytris sub-striato-punctatis.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{2}$  lin.)

De. violaceus. *Linné.*—*Martyn, E. pl. 6. f. 7. ?*—Co. violaceus. *Steph. Catal.* 138. No. 1409.

Glossy blue or greenish; clothed with a fuscous pile: antennæ black, the base fuscous: thorax slightly punctured: elytra obsoletely punctate-striate: body beneath dark-bluish, or greenish: legs greenish-brown.

Very variable in size and colour.

Extremely abundant in hedges near Ripley, in June, and also at Hertford, at the same time: it likewise is common in houses at the latter place. “Epping.”—*Mr. Doubleday.* “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Swansea.”—*L. W. Dillwyn, Esq.*

FAMILY XL.—PTINIDÆ, *Leach.*

*Antennæ* sometimes ten-jointed; filiform, elongate, simple or pectinated, occasionally serrated; or short, slightly thickened at the apex, with the three terminal joints suddenly elongated: *mandibles* short, stout, bifid or bidentate at the tip: *palpi* short, nearly equal; the terminal joint rather largest: *maxillæ* bilobed: *labium* emarginate: *head* rounded, deeply immersed in the *thorax*, which is mostly cucullated: *abdomen* large, convex or gibbous: *tarsi* mostly short, five-, rarely four-jointed.

The Ptinidæ consist of two apparently distinct groups, one of which has the antennæ filiform, with the tarsi simple and always pentamerous; the other having the three apical joints of the antennæ considerably and suddenly elongated, and slightly incrassated, with the tarsi occasionally tetramerous, and the penultimate joint sometimes bilobed.

The Ptinidæ in many points of habit resemble the Dermestidæ; like those insects they attack and devour, both in their larvæ and imago states, the dried remains of animals or wood: when touched, they also counterfeit death, applying their antennæ and legs closely to the body, and withdrawing their head; and so tenaciously fearful are they, that they defy the utmost attempts to arouse them, the united effects of fire and apparent torture not inducing them to move a limb.

The larvæ, which subsist on dry wood, are white, soft, with the head brown, scaly, and armed with two stout mandibles, with which they tear the wood upon which they feed, reducing it to a fine yellowish powder, with which their canals are filled, and in which they change to pupæ:—those that destroy animal remains resemble closely the larvæ of the lamellicornes; they are yellowish, pilose, and velvety, elongate, cylindric, rugose, and curved posteriorly, so that they have not the power of walking on a flat surface;—they change to pupa towards the end of summer in a cocoon formed of the debris of the materials upon which they had previously subsisted; and the imago appears in the following autumn or spring: the indigenous species are somewhat numerous, and require the following subdivisions into genera.

Antennæ	filiformes. <i>Elytra</i>	libera. <i>Antennæ</i>	{ serratæ, vel pectinatæ. <i>Corpus</i>	{ latum, ovatum : 250. XILETINUS. elongato-ovatum : 251. PTILINUS.		
	connata. <i>Thorax</i>	{ simplices : oculis subprominulis : . 252. PTINUS. longitudinalitèr porcatus : . 253. MEZIUM. lævis, transversus : . 254. GIBBIUM.				
	vix fili- formes, articulis	11. <i>Palpi</i>	{ securiformes. <i>Antennæ</i> arts. 6 intermediis minutis : 255. DORCATOMA.			
		{ haud securi- formes. <i>Antennæ</i> { art <sup>o</sup> . ult <sup>o</sup> . solo elongato, acuto : 257. OCHINA. arts. 3-bus ul- timis subitò longioribus. <i>Palpi</i> { clavati : 256. ANOBIUM. art <sup>o</sup> . ult <sup>o</sup> . acuto : 258. CHORAGUS.				
		10 discretis : <i>tarsi</i> tetramera : . . . . .		259. CIS.		

## GENUS CCL.—XILETINUS, Latreille.

*Antennæ* inserted before the eyes, serrated in both sexes, composed of triangular articulations, the second and third excepted, which are short and subglobose. *Palpi* with the terminal joint subfusiform : *head* rather broad ; *eyes* globose : *thorax* transverse, sinuated behind, and sometimes expanded laterally : *elytra* sinuated at the sides : *body* short, ovate : *legs* rather long.

The short ovate form of the Xiletini, combined with their broad thorax, short, serrated antennæ, and deeply striated elytra, of which the lateral margins are sinuated, sufficiently distinguish them from the Ptilini, with which they agree in their propensities to destroy old wood. The species are rare in Britain.

Sp. 1. striatus. *Niger opacus, holosericeo-pubescent, antennis pedibusque rufis* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Se. striatus. *Kugellan.*—Xi. striatus. *Steph. Catal.* 139. No. 1410.

Dull black, clothed with a fine silken pubescence : head punctulate, with an obsolete elevated frontal line : thorax very convex, a little waved behind, the disc punctured : elytra oblong-ovate, sinuated on the sides, the apex rounded, the disc punctate-striate, the striæ disposed in pairs, and the interstices very finely punctured : legs and antennæ pale rufous, the apex of the latter and femora sometimes fuscous.

Rare : I possess a single example, taken near London in an old post. “Spitchweek, beneath moss.”—*Dr. Leach*. “Cobham, on palings, June, 1830.”—*A. Cooper, Esq.*

Sp. 2. ater. *Niger opacus, holosericeo-pubescent, antennis nigris, tibiis tarsisque solum testaceis.* (Long. corp.  $1\frac{1}{3}$ —2 lin.)

Ph. ater. Panzer.—Xi. ater. *Steph. Catal. 139. No. 1411.*

Dull black, with a short silken pubescence: head distinctly punctate, with an evident frontal carina: thorax finely punctured, with the lateral margins expanded: elytra as in the foregoing, punctate-striate, with the interstices punctured, and the lateral margin sinuated: body beneath and femora pitchy; tibiæ and tarsi rufo-testaceous: antennæ black.

The only example I ever found of this insect I caught upon some old palings at Hertford, in July, 1826:—it has, I believe, been found in Norfolk.

### GENUS CCLI.—PTILINUS, *Fabricius.*

*Antennæ* inserted before the eyes; the basal joint elongate, bent: the second short, nodose; the remainder pectinated in the males, serrated in the females; the radii in the males subclavate, and in the females acute. *Palpi* filiform, with the terminal joint conic-acute: *head* broad, deflexed; *eyes* large: *thorax* subglobose: *body* elongate, subcylindric: *legs* slender.

The Ptilini—which differ from the preceding and following genera, by the structure of their antennæ, and the form of the thorax and abdomen—like the Anobia, perforate and destroy old trees and wood, making round deep cylindric holes therein, especially attacking the trunks of old willows.

Sp. 1. pectinicornis. *Nigro-fuscus, antennis pedibusque pallidè testaceis, elytris brunneo-testaceis, vix costatis, thorace subgloboso anticè integro.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{4}$  lin.)

Ptinus pectinicornis. *Linne.—Don. x. pl. 326.—Ptil. pectinicornis. Steph. Catal. 139. No. 1412.*

Opaque, fuscous-black: head punctured: mouth testaceous: thorax very convex, subglobose, somewhat granulated, the anterior margin reflexed, but not emarginated: elytra narrower than the middle of the thorax, very convex, fuscous or pale testaceous, irregularly punctate, the punctæ somewhat disposed in striæ towards the margins: body beneath piceous: legs pale testaceous, with the femora sometimes dusky at the base; antennæ pale testaceous, with the radii considerably elongated in the males.

Very variable in size and colour: but known from the following by the almost total absence of the costæ on the elytra and the integrity of the anterior margin of the thorax.

Extremely common in old decayed willows throughout the metropolitan district, and in Norfolk. “Bristol.”—*G. Waring, Esq.* “Epping.”—*Mr. Doubleday.* “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Very common (at Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 2. *costatus.* *Saturatè niger, antennis tibiis tarsisque luteo-ferrugineis, elytris lineis elevatis perspicuis, thorace anticè lævitè emarginato.* (Long. corp.  $1\frac{3}{4}$ — $2\frac{1}{2}$  lin.)

Ptil. *costatus.* *Gyllenhal*, iv. 329.—Pt. *pectinicornis.* var.  $\beta$ .? *Steph. Catal.* 139. No. 1412.

Deep satiny black: thorax with the anterior margin more or less emarginated in the middle; elytra deep black or castaneous, each with two or three elevated longitudinal lines: femora for the most part and sometimes the tibiæ pitchy-black: antennæ and tarsi of a rusty-luteous; the radii of the former somewhat clavate and abbreviated in the males.

The emarginate anterior edge of the thorax and subcostated elytra, with the general darker colour, and larger size of the insect, distinguish it from the other species.

Found in willows and poplars; not so common as the foregoing.

## GENUS CCLII.—PTINUS *Auctorum.*

*Antennæ* approximating at the base, elongate, filiform, composed of subcylindric nearly equal articulations, the second alone being abbreviated: *Palpi* unequal, subfiliform: *maxillæ* unidentate at the origin of the palpi: *head* small: *eyes* globose, rather prominent: *thorax* cucullate, generally coarctate behind: *abdomen* much broader than the head and thorax, suboval or globose; *legs* long and slender; *femora* (especially in the males) clavate.

From *Mezium* and *Gibbium*, which have the abdomen ovate and tumid, and broader than the head and thorax, *Ptinus* may be known by the elytra not being soldered together at the suture, by the dissimilarity in the structure of the antennæ, the second and third joints of which are not stouter than the others, in having a distinct scutellum, &c.:—the species are many of them very destructive to collections of dried plants and insects, upon which their larvæ subsist: the pupa is enclosed in a delicately white silken tissue.

Sp. 1. *imperialis.* *Oblongus, fuscus, thorace posticè carinato, elytris lævibus maculâ sinuatâ-lobatâ, apiceque albis.* (Long. corp.  $2$ — $2\frac{1}{2}$  lin.)

*Pt. imperialis.* Linné.—*Steph. Catal.* 139. No. 1413.

Oblong, fuscous; covered with a whitish down: thorax compressed longitudinally in the middle into an elevated carina, terminating posteriorly in a spine: the down on the elytra is more obscure, and is produced on each side into a white sinuated spot, the union of which on both elytra somewhat resembles the figure of an imperial eagle; the apex is also whitish: legs and antennæ ferruginous.

This beautiful species somewhat recedes in habit from the rest of the genus.

Not very common: found occasionally in hedges throughout the metropolitan district; I have caught it at Hertford, Darent-wood, Ripley, Coombe, &c. “Bristol.”—*G. Waring, Esq.* “Copenhagen-fields and Cobham.”—*A. Cooper, Esq.* “Epping.”—*Mr. Doubleday.* “Whitethorn, Glanville’s Wootton, and Bristol.”—*J. C. Dale, Esq.* “Battersea-fields.”—*Mr. Inghen.*

*Sp. 2. rufipes.* *Oblongus, nigricans, griseo-pubescent, thorace quadridentato, postice impresso, antennis pedibusque rufis.* (Long. corp.  $2-2\frac{3}{4}$  lin.)

*Pt. rufipes.* Fabricius.—*Steph. Catal.* 140. No. 1415.

Oblong, dusky: thorax quadridentate, with a posterior impression: elytra deeply punctate-striate, with the shoulders gibbous, and clothed with a griseous pubescence: antennæ and legs rufous; the latter with clavate femora, and the former nearly as long as the body.

Found with the following insect; of which it is probably the male.

*Sp. 3. Germanus.* *Oblongo-ovatus fusco-ferrugineus, thorace quadrituberculato, elytris nigro-brunneis, fasciis duabus undulatis punctoque apicis albis.* (Long. corp.  $2-2\frac{1}{2}$  lin.)

*Pt. Germanus.* Olivier.—*Steph. Catal.* 140. No. 1414.

Oblong-ovate, rusty-brown; villose: thorax quadridentate: scutellum snowy: elytra punctate-striate, black-brown, with two waved whitish fasciæ, and a spot of the same colour at the apex: antennæ and legs testaceous.

Perhaps merely the female of the foregoing.

Not common: found occasionally in the vicinity of London; in Norfolk, Suffolk, Devonshire, &c. “Palings near Cobham, June, 1830.”—*A. Cooper, Esq.* “Swansea.”—*L. W. Dillwyn, Esq.*

*Sp. 4. sexpunctatus.* *Oblongus, fuscus, pubescens, fronte, scutello, elytrorum fasciâ anticâ abbreviatâ, punctisque duobus posticis niveis.* (Long. corp.  $2-2\frac{1}{3}$  lin.)

*Pt. sexpunctatus.* Fabricius.—*Pt. Musæorum.* *Steph. Catal.* 140. No. 1416.

Oblong, fuscous, pubescent: forehead white: eyes black: thorax with four tubercles transversely disposed in pilose fascicles: scutellum niveous; elytra fuscous-brown, crenate-striate: with a snow-white transverse villose fascia at the base, not touching the suture, and throwing off a small branch in the middle anteriorly, and behind the middle are two other villose niveous spots, which are sometimes united into an abbreviated fascia: legs and antennæ rusty-fuscous; femora slightly clavate.

Larger than Pt. Fur, with the fasciæ on the elytra of a different form, the pubescence shorter, femora less clavate, &c.

Not common in the neighbourhood of London. “Hyde-park.” *A. Cooper, Esq.* “Old houses, Carlisle.”—*T. C. Heysham, Esq.* “In houses, &c., abundantly in Edinburgh.”—*Dr. Leach.* “Farley, Dorset.”—*J. C. Dale, Esq.*

Sp. 5. Fur. *Fusco-ferrugineus pubescens, thorace quadrifasciculato, elytris interrupte albofasciatis, femoribus elongatis clavatis.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Pt. Fur. *Linné.*—*Wood. i. pl. 4.*—*Steph. Catal. 140. No. 1417.*

Fuscous, clothed with an ashy-down: head ferruginous: eyes black: thorax with four transverse fascicles: the back channelled: scutellum cinereous: elytra rather dusky, with two interrupted whitish fasciæ, one a little bent towards the base, the other near the apex, the disc crenate-striate: legs ferruginous; femora elongate clavate: antennæ also ferruginous, elongate in the males, shorter in the females.

Very variable in size and colour; being more or less ferruginous or testaceous, and in some instances the elytra are immaculate. Male elongate and more slender than the female.

Extremely abundant in old houses in London, and throughout the metropolitan district, and very destructive to neglected collections of insects and plants. “Old houses, Carlisle.”—*T. C. Heysham, Esq.* “Swansea, not uncommon.”—*L. W. Dillwyn, Esq.*

Sp. 6. crenatus. *Obscure testaceus pubescens, thorace gibbo-submutico, elytris crenato-striatis immaculatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Pt. crenatus. *Fabricius.*—*Steph. Catal. 140. No. 1418.* ♂. Pt. *Cerevisiæ.* *Steph. Catal. 140. No. 1419.*

Dull-testaceous, pubescent: thorax gibbous, obsoletely bituberculated, the base coarctate; elytra crenate-striate, immaculate, clothed with an ashy pubescence: antennæ and legs ferruginous; the femora subclavate. Male smaller, of a paler rufo-ferruginous; the thorax shorter, more globose; elytra oblong-ovate, narrower; the femora very slender at the base, and the apex more clavate, and the antennæ somewhat longer than in the female.

Found also in old houses in and about the metropolis: at Hert-



ford, Ripley, &c.; and in Norfolk. “Epping.”—*Mr. Doubleday*. “Hurne.”—*J. C. Dale, Esq.* “Swansea, not uncommon.”—*E. W. Dillwyn, Esq.* “Houses in Scotland, not uncommon.”—*Dr. Leach*.

Sp. 7. Lichenum. *Niger, elytris fasciis duabus undulatis albis; antennis pedibusque rufis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Pt. Lichenum. *Marsham*.—*Steph. Catal.* 140. No. 1420.—Pt. similis. *Steph. Catal.* 140. No. 1421. ♀.

Oblong, black or fuscous: thorax gibbous, obsoletely bidentate: elytra striate, undulated with white, or obsoletely clothed with the same: scutellum white: antennæ and legs rufous; the femora slightly clavate. The female with the abdomen more tumid, the elytra more distinctly marked, and the antennæ shorter.

Not so frequent as the last; found chiefly in hedges, old trees, &c., in various parts throughout the metropolitan district. “Palings, Cobham.”—*A. Cooper, Esq.* “Windsor.”—*Mr. Waterhouse*.

#### GENUS CCLIII.—MEZIUM, *Leach*.

*Antennæ* approximating, subfiliform, robust, squamous; the basal joint slightly clavate, and the two following a little stouter than the remainder, which are subequal, the last being longest and obliquely acuminate: *head* small: *eyes* minute: *thorax* pubescent, longitudinally squamous: *scutellum* wanting: *elytra* connate, gibbous, shining, subhyaline: *legs* rather long; *femora* clavate.

Mezium differs from Ptinus by having the elytra connate, or united, and extremely smooth and glossy, the antennæ squamous, with the second and third joints somewhat incrassated, and the terminal one acuminate: the scutellum wanting, and in other less evident characters: in habit it however resembles the Ptini, subsisting upon dried decaying animal and vegetable substances.

Sp. 1. sulcatum. *Thorace villosio albido, elytris fusco-testaceis, nitidis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Pt. sulcatus. *Fabricius*.—Me. sulcatum. *Steph. Catal.* 140. No. 1422.—*Curtis*, v. pl. 232.

Head and thorax clothed with a whitish down, the latter with two longitudinal elevated ridges down the centre, and the margin thickened: elytra gibbous, very smooth and polished, fusco-testaceous or castaneous: legs and antennæ white.

Not very common; found occasionally in old houses in London;

and sometimes in other places within the metropolitan district. "Lincoln's Inn Fields."—*Mr. Inghen*. "Has been taken in the neighbourhood of Swansea."—*L. W. Dillwyn, Esq.*

#### GENUS CCLIV.—GIBBIUM, *Kugellan*.

*Antennæ* approximating, subsetaceous, the articulations cylindric; the second, third, and fourth rather thickened; the terminal joint slightly elongate and obtusely acuminate at the apex: *head* deeply inserted in the *thorax*, which is short, transverse, smooth, produced in the middle behind, in place of the *scutellum*, which is wanting: *eyes* minute: *body* ovate, gibbous, compressed laterally: *elytra* connate, glossy, smooth: *legs* elongate: *femora* suddenly clavate at the apex.

Gibbium may be readily known from Mezium, which it resembles in having the elytra connate, glabrous, and shining, by the short, smooth thorax, the incrassation of the second, third, and fourth joints of the antennæ, the obtusely acuminate terminal joint, and the compressed form of body.

Sp. 1. *Scotias*. *Castaneus, nitidus, antennis pedibusque pubescentibus*. (Long. corp. 1—1½ lin.)

Pt. *Scotias*. *Fabricius*.—Gi. *Scotias*. *Steph. Catal.* 140. No. 1423.

Shining castaneous, impunctate: with the antennæ and legs pubescent.

Rare in the south, but apparently not very uncommon in the north of England. "Bristol."—*Mr. Millard*. "Newcastle-on-Tyne."—*G. Wailes, Esq.*

#### GENUS CCLV.—DORCATOMA, *Herbst*.

*Antennæ* with the basal joint robust, somewhat elongated and bent; the second small, nodose, or slightly produced within: the six following extremely minute and slender; the remainder very large, compressed, triangular, the two basal ones more or less produced within. *Palpi* four, unequal, securiform; *head* short, transverse: *thorax* transverse, sinuated or rounded behind; *elytra* striated laterally, punctate on the back: *legs* short, simple; *tarsi* very short.

The singularly constructed antennæ of Dorcatoma sufficiently distinguish this genus from the rest of the family, the first joint thereof being incrassated, the second small, but still comparatively

robust, the six following extremely minute, and the three terminal ones composing nearly half the entire length, stout, and in some cases produced internally into slight rays.

Sp. 1. *Dresdensis*. *Ovalis, convexa, nigra, antennis pedibusque rufis, elytris margine bistriatis, oculis integris.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Do. *Dresdensis*. *Herbst.—Steph. Catal.* 141. No. 1424.

Oval, convex, black: thorax very convex, truncate anteriorly, with the deflexed angles much produced, the sides nearly straight, the posterior margins sinuate-rounded, with the angles obtuse: elytra finely punctured, with the apex rounded; the lateral margin of each with two parallel deeply punctate striæ: legs and antennæ rufo-ferruginous: eyes entire.

Very rare: it has been found in Suffolk, and near London. "Taken in a window, by Mr. Kirby."—*Marshall MSS.* "Cobham, 19th August, 1830."—*A. Cooper, Esq.*

Sp. 2. *Bovistæ*. *Subglobosa, nigra, antennis pedibusque fusco-piceis, elytris margine substriatis, oculis sulco divis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Do. *Bovistæ*. *Ent. Hefte.—Steph. Catal.* 141. No. 1425.

Subglobose, black, punctulate: thorax very convex, truncate and narrowed anteriorly, broad behind, the posterior margin sinuated: elytra broader at the base than the thorax, dilated laterally, the sides with two nearly entire striæ, and a third about half the length at the base: legs and antennæ pitchy-fuscous: eyes divided by a deep sulcus nearly into two parts.

Also very rare: I have hitherto seen but three specimens: one of which was found near London, the others near "Windsor and Spitchweek."—*Dr. Leach.*

Sp. 3. *rubens*. *Globosa, ferruginea, thorace posticè rotundato, elytris margine tristriatis, oculis integris.* (Long. corp.  $1\frac{1}{3}$  lin.)

Do. *rubens*. *Ent. Hefte, ii.* 103. pl. 3. f. 12.

Globose, ferruginous: thorax very short, rounded behind, the posterior angles obliterated, the disc slightly dusky: elytra broad, punctured, the lateral margin with three entire longitudinal striæ; the humeral callus rather prominent: antennæ rather short, pale testaceous: legs ferruginous: eyes entire.

My own example of this singular insect—which recedes from the type of the genus—the only one which I have seen, was found about five years since "in an old tree, Regent's Park."—*Mr. Lumley.*

GENUS CCLVI.—*ANOBIUM*, *Fabricius*.

*Antennæ* subfiliform, distant at the base, with the three terminal joints a little incrassated and suddenly elongated, the two basal of which are somewhat obconic, and the apical one oval. *Palpi* clavate: *head* short, retractile: *thorax* short, gibbous, the sides margined: *scutellum* short, rounded: *body* ovate-cylindric, rounded anteriorly and posteriorly: *elytra* embracing the abdomen: *legs* simple; *tarsi* composed of short articulations.

The *Anobia* may be known by their cylindric form and subfiliform antennæ, the three terminal joints of which are suddenly very much longer and stouter than the foregoing; in which point they somewhat agree with *Choragus* and *Cis*, but their tarsi, although short, are evidently pentamerous.

Their larvæ are very destructive to furniture, particularly to such articles as are made of soft wood, perforating and riddling it in all directions, forming little round deep holes: they are white, soft, elongate, with six short legs; the head is scaly and terminated by two very powerful mandibles, by which they reduce the wood to an almost impalpable powder, within which they change to pupæ, in a soft silken cocoon:—some however attack hard bread or biscuit, or the dried remains of animals, as skins and insects in collections.

Some of the species, when in search of a mate, are remarkable for the singular noise they make, which distantly resembles the faint ticking of a watch—thence called “*death watches*,” and the origin of many superstitious notions.

## A. With the elytra striated.

Sp. 1. *castaneum*. *Fusco-castaneum*, *pubescens*, *oculis nigris*, *thorace antice transversim impresso*, *elytris profundè crenato-striatis*. (Long. corp. 2—2 $\frac{3}{4}$  lin.)

An. *castaneum*. *Fabricius*.—*Steph. Catal.* 141. No. 1426.

Fuscous, inclining to castaneous, pubescent: eyes black, thorax rugose-punctate, with a transverse impression within the anterior margin, the disc rather densely pubescent: elytra rather more castaneous than the head and thorax, deeply crenate-striate, with the interstices slightly elevated and finely punctulated; antennæ and legs ferruginous; the latter fuscous.

Extremely variable in size, and slightly so in colour.

Not very common, in whitethorn hedges, within the metropolitan

district. "Harraby, Cumberland."—*T. C. Heysham, Esq.* "Glanville's Wootton."—*J. C. Dale, Esq.*

Sp. 2. *rufipes*. *Elongatum, subglabrum, nigrum, obscurum; thorace canaliculato posticè rotundato, gibbo, antennis pedibusque rufis.* (Long. corp.  $1\frac{1}{2}$ — $2\frac{1}{4}$  lin.)

An. *rufipes*. *Fabricius*.—*Steph. Catal.* 141. No. 1427.

Elongate, nearly glabrous, dull black; head granulated: mouth rufescent: thorax truncate anteriorly and subemarginate in the middle, the disc very convex, with a more or less distinct longitudinal dorsal line, and the base on each side with a somewhat bilobed impressed fovea: elytra elongate, linear, slightly pubescent, punctate-striate, with the interstices convex and finely granulated: legs rufo-ferruginous: antennæ rufous.

Variable in size and colour: in some examples the suture and margins of the elytra are rufo-piceous, and others are almost totally of a ferruginous or castaneous hue:—probably immature.

Abundant in hedges throughout the metropolitan district: also found at Dover, Hastings, &c. "In the garden at the Willows (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 3. *pertinax*. *Nigro-fuscum, obscurum, thorace rugis elevatis, basi utrinque maculâ ochraceâ, elytris striatis, striis punctatis.* (Long. corp.  $2\frac{1}{4}$  lin.)

Pt. *pertinax*. *Linné*.—An. *pertinax*. *Steph. Catal.* 141. No. 1428.

Dusky-black, obscure: thorax fuscous, very pubescent and convex, with an elevated carina posteriorly, giving off two branches in front, and a third in the middle behind, within each of the lateral margins an impression, and a larger one at the posterior angles; this last is densely clothed with an ochreous pile: elytra deeply punctate-striate; the interstices smooth and flat: femora pitchy-fuscous; tibiæ and tarsi pale ferruginous.

The rugose thorax, with the distinct ochraceous patch of down at the posterior angles, and the deep hue of the insect sufficiently distinguish it from An. *striatum*.

Apparently rare: the only indigenous example of the true species that I have seen being my own specimen, which I obtained from the Marshamian cabinet, without a name. "Swansea."—*L. W. Dillwyn, Esq.*

Sp. 4. *denticolle*. *Fusco-ferrugineum, pubescens, thorace obsolete canaliculato, utrinque foveis duabus profundis impresso, angulis posticis in dentem acutum productis.* (Long. corp.  $2\frac{1}{2}$  lin.)

An. *denticolle*. *Creutzer*.—*Panzer*, F. xxxv. f. 8.

Dusky-ferruginous, slightly pubescent: thorax broad anteriorly, its lateral margins depressed, and terminating posteriorly in an acute denticulation; the

disc obsoletely channelled, with a large somewhat deep fovea on each side at the base, and another towards the articular angle: elytra opaque, slightly punctate-striate: femora dusky: tibiæ and tarsi ferruginous.

Allied to the foregoing, but at once known by the acute tooth at the posterior angles of the thorax, its dark colour, &c.

A single specimen in my collection, caught near London, in June.

Sp. 5. striatum. *Fusco-piceum, pubescens, convexum, thorace canaliculato, posticè compresso, carinâ elevatâ trigonâ.* (Long. corp.  $1\frac{1}{2}$ —2 lin.)

An. striatum. Olivier.—*Steph. Catal.* 141. No. 1430.

Pitchy-brown, convex, pubescent; the pubescence griseous: thorax compressed behind, with an elevated triangular carina, and a longitudinal dorsal channel; on each side of the hinder margin are two foveæ, one shallow towards the carina, and the other near the margin and deep; elytra striate, the striæ formed of small distinct punctures, the interstices flat and finely shagreened: antennæ and legs ferruginous: slightly variable in colour.

Extremely abundant in old houses in London and its vicinity; also frequent in other parts. “Not uncommon (near Swansea).” —*L. W. Dillwyn, Esq.*

Sp. 6. nitidum. *Nigro-piceum, subpubescens, antennis pedibusque testaceis, thoracis disco posteriùs triangularitèr elevato, foveis includentibus profundè impressis arcuatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

An. nitidum. *Herbst.*—An. Fagi. *Steph. Catal.* 141. No. 1429. dele *Herbst.*

Piceous-black, slightly pubescent: thorax with the disc behind elevated triangularly, in which are two deep arcuated foveæ: antennæ and legs pale testaceous, the latter with the femora sometimes dusky. Variable in colour, sometimes rufo-ferruginous.

Less pubescent, with the foveæ on the thorax deeper and curved, the antennæ and legs testaceous, &c., darker than An. striatum, to which it is very closely allied.

Less common than the last; found in the metropolitan district.

Sp. 7. paniceum. *Ovatum, ferrugineum, pubescens, thorace convexo æquo, elytris tenuè striatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Da. paniceus. *Linné.*—An. paniceum. *Steph. Catal.* 141. No. 1431.

Ovate, ferruginous; slightly pubescent; eyes black: thorax convex, equal, finely punctured, with a narrow fovea on each side of the posterior margin; elytra convex, rounded at the apex, clothed with an evident pubescence, delicately striated, the striæ composed of minute punctures, the interstices flat and finely rugulose: antennæ and legs rufo-ferruginous.

Larvæ white, curved; it feeds upon farinaceous substances, and is particularly attached to old bread and wafers, the latter of which it fastens together in masses of three or four, within which it undergoes its metamorphosis, the insect appearing in plenty in June:—it will also attack neglected collections of insects.

Very common throughout the metropolitan district.

B. Elytra with scattered punctures, not striated.

Sp. 8. tessellatum. *Fusco-ferrugineum, subtilissimè scabrosum, pube flavescente tessellatum, thorace convexo vix foveolato.* (Long. corp. 2—3 lin.)

An. tessellatum. *Fabricius.—Steph. Catal. 142. No. 1432.—Pt. fatedicus Shaw, N. M. iii. p. 104.*

Ferruginous-brown, scabrous: thorax and elytra punctulate, tessellated with a flavescent down, the former convex, scarcely foveolated, its anterior margin considerably elevated over the head: antennæ dusky-ferruginous, slightly serrated: legs fusco-piceous.

Found in old trees, especially willows, throughout the metropolitan district, in June and July; but not very plentifully. “Netley.”—*Rev. F. W. Hope.* “West-walls.”—*T. C. Heysham, Esq.* “Epping.”—*Mr. Doubleday.* “Glanville’s Wootton.”—*J. C. Dale, Esq.* “Not uncommon (near Swansea): by the Welsh it is called *Marw oriawr.*”—*L. W. Dillwyn, Esq.* “Old oak, Copenhagen-fields.”—*Mr. Ingpen.*

Sp. 9. molle. *Oblongum, testaceum pubescens, thorace postice rotundato marginato, antennis mediocribus articulis ultimis filiformibus.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

Pt. mollis. *Linné.—An. molle. Steph. Catal. 142. No. 1434.*

Oblong, testaceous, pubescent: eyes brown-black: thorax short, rounded behind and margined; the sides deflexed and rounded: the disc moderately convex, thickly punctured; elytra linear-elongate, finely and thickly punctured, dull testaceous; the apex rounded and somewhat glossy: legs and antennæ ferruginous: the latter rather elongate, with the three terminal joints, especially in the males, filiform and slender. Slightly variable in colour.

Rare: found in pine woods. “Netley.”—*Rev. F. W. Hope.* “Near Carlisle.”—*Dr. Leach.* “Swansea, once.”—*L. W. Dillwyn, Esq.*

Sp. 10. Abietis. *Oblongo-ovatum, fusco-testaceum, pubescens, thorace postice truncato, lateribus depresso, antennis mediocribus.* (Long. corp. 2 lin.)

An. Abietis. *Fabricius.—Steph. Catal. 142. No. 1433.*

Oblong-ovate, fusco-testaceous, pubescent: eyes dusky-black: thorax short,

truncate posteriorly, its lateral edges broadly expanded and densely pubescent: elytra linear-elongate, pale-reddish; breast obscure brown: legs pale rufotestaceous: antennæ rather short, ferruginous, the three basal joints determinately incrassated.

Differs from the foregoing in having the thorax distinctly truncate behind, the antennæ shorter with the three terminal joints manifestly incrassated, and by its more ovate form.

Also rare; and found in pine woods. "Scotland, by Mr. Wilson."  
*Dr. Leach.* "Penllergare, not common."—*L. W. Dillwyn, Esq.*

†Sp. 11. erythropum. *Nigro-piceum subnitidum, pubescens, antennis pedibus oculisque ferrugineis.* (Long. corp. 2 lin.)

An. erythropum. *Leach MSS.—Steph. Catal. 142. No. 1435.*

Pitchy-black, slightly shining and pubescent: the antennæ, legs, and eyes ferruginous.

The only example I have seen of this insect was taken in "Rivestone-wood, by R. Rawlins, Esq."—*Dr. Leach.*

#### GENUS CCLVII.—OCHINA, *Zeigler.*

*Antennæ* long, the basal joint robust; the second smaller, subglobose; the two following slender, obconic; the fifth to the tenth subequal, conic-triangular, produced within and forming a serrated edge; the terminal joint elongate-ovate, acuminate. *Palpi* short; *maxillary* with the apical joint obtuse: *head* small, nutant: *thorax* transverse, narrowed anteriorly, and somewhat produced in front: *elytra* convex, the lateral margin not sinuated: *body* oblong-ovate, moderately convex: *femora* slightly incrassated: *tibiæ* simple, pilose; *tarsi* five-jointed.

This singular genus, which is obviously very distinct from *Anobium*, may be readily known from the insects of that genus by the antennæ being serrated, and by having the terminal joint alone of the antennæ elongate: the thorax is not convex, or produced in front, as in them, and the elytra are rather densely clothed with pile.

Sp. 1. ptinoides. *Pubescens, castanea, elytris lavibus fasciis duabus undatis cinereis, antennis pedibusque rufotestaceis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Cr. ptinoides. *Marshall.—Och.? Ptinoides. Steph. Catal. 142. No. 1436.*

Castaneous, pubescent: elytra smooth, castaneous, with two somewhat waved fasciæ, composed of cinereous down: abdomen castaneous-brown, clothed with



a cinereous pubescence: antennæ and legs rufous or rufo-castaneous: eyes black.

Abundant in old hedges near Ripley in June: it frequents trees that are deeply enveloped in ivy, upon which it feeds in the larva state: also found in the lane near Coombe-wood. "On a crab-tree clothed with ivy, near Cobham, June, 1830."—*A. Cooper, Esq.*:—who conceives that *Cleonymus dispar* is parasitic upon the larva of this insect.

### GENUS CCLVIII.—CHORAGUS, *Kirby*.

*Antennæ* with the two basal joints incrassate; the third short, obconic; the fourth subelongate, cylindric; the four following obconic; the three terminal ones suddenly longer; the ninth and tenth being obconic, and the last nearly ovate; the three forming a loose club. *Palpi* subsetaceous, the terminal joint acute, and nearly subulated: *mandibles* acute: *head* inflexed: *clypeus* elongate: *thorax* convex: *scutellum* minute: *body* cylindric.

Choragus is evidently allied to *Cis*, from which it differs not only by having the two basal joints of the antennæ incrassated, but by the form of the body, which resembles that of a *Cryptocephalus*, the subsetaceous palpi, acute mandibles, &c., and by the property the living insect possesses of leaping considerably.

† Sp. 1. Sheppardi. *Fusco-piceus punctatus, elytris striatis, antennis pedibusque rufescentibus.* (Long. corp.  $\frac{3}{4}$  lin.)

Ch. Sheppardi. *Linn. Trans. (Kirby.)* xii. pl. xxii. f. 14.—*Steph. Catal.* 142. No. 1437.

Pitchy-brown, clothed with an obscure pubescence: head subtriangular, punctulated: eyes black: thorax conic globose, very much punctured, each puncture, beneath a powerful lens, with a central eminence: elytra punctate-striate: tibiæ rufous: tarsi also rufous, with the intermediate articulations broader than the rest.

Taken in Suffolk by the late Rev. R. Sheppard; also near Ripley, in July, 1827, by myself; but the specimen was unfortunately lost.

† Sp. 2. niger. *Ater, punctulatus, elytris striatis, antennis pedibusque fusco-piceis.* (Long. corp.  $\frac{3}{4}$  lin.)

Ch. niger. *Kirby MSS.*—*Steph. Catal.* 142. No. 1438.

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Black, slightly pubescent; punctured: elytra punctate-striate: the antennæ and legs pitchy-brown.

Also found in Suffolk: it may be only a more mature state of the foregoing insect.

### GENUS CCLIX.—CIS, Latreille.

*Antennæ* inserted at the base of the mandibles, the basal joint large, robust, ovate; the second smaller, ovate; third slender, obconic; the four following very short, coarctate, truncate; the remaining three large, forming a sub-perfoliate elongate club, of which the two basal joints are truncate, and the terminal one ovate. *Palpi* unequal, *maxillary* thickened externally, with the terminal joint subovate; *labial* small, subulated, with the apical joint slender, conic: *mandibles* exerted, apex bidentate: *head* transverse; sometimes tuberculated in front in the males; *eyes* prominent: *thorax* transverse, margined; the anterior edge generally produced over the head: *body* ovate, convex above: *tarsi* tetramerous.

Cis, which from its tetramerous tarsi is placed by Latreille at a remote distance from Ptinus, appears both in habit and structure to approximate closely to the genus last mentioned, or rather to the family of which it forms the type: like Anobium and Choragus the three terminal joints of the antennæ are suddenly elongate and incrassated, but from the former genus it may be known by its tetramerous tarsi, and from the latter by its more cylindric form, the different structure of the antennæ, &c.:—the species feed upon Boleti.

Sp. 1. Boleti. *Brunneo-nigricans aut castaneus, nitidiusculus, temerè punctulatus, elytris subrugulosis, antennis pedibusque dilutioribus, rufescentibus.* (Long. corp.  $1\frac{3}{4}$ —2 lin.)

An. Boleti. *Fabricius*.—Cis Boleti. *Steph. Catal.* 142. No. 1439.

Dusky-brown or castaneous, somewhat pubescent, and a little glossy, thickly punctured: the thorax unequal, reflexed anteriorly, with the sides broadly margined, and obtusely angulated posteriorly; elytra somewhat irregularly rugulose-punctate: antennæ and legs rufescent, or testaceous.

Variable in colour, arising from its state of maturity, being more or less pale brown or testaceous, sometimes nearly ochreous.

Found in Boleti during the summer very abundantly. “Dalston-wood.”—*T. C. Heysham, Esq.* “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 2. *concinus*. *Ferrugineus, pilosus, pectore pedibusque rufis*. (Long. corp.  $\frac{3}{4}$  lin.)

Pt. *concinus*. *Marsham*.—Cis *concinus*.—*Steph. Catal.* 143. No. 1440.

Ferruginous; pilose: elytra punctate; the abdomen beneath rufo-fuscous; the breast and legs rufous.

Half the size of the foregoing; and differs not only in its colour, but the elytra are not rugulose.

Taken within the metropolitan district. "Swansea."—*L. W. Dillwyn, Esq.*

Sp. 3. *flavus*. *Flavo-testaceus, oculis nigris, elytris lævibus, antennis pedibusque pallide testaceis*. (Long. corp.  $1\frac{1}{4}$  lin.)

Cis *flavus*. *Kirby MSS*.—*Steph. Catal.* 143. No. 1441.

Testaceous-yellow; subglabrous: eyes black: thorax convex, unequal: elytra smooth: antennæ and legs pale testaceous.

From the Marshamian cabinet.

Sp. 4. *micans*. *Fusco-piceus, antennarum basi pedibusque testaceis, elytris obsolete, vagè, punctato-subrugosis*. (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

An. *micans*. *Fabricius*.—Cis *micans*. *Steph. Catal.* 143. No. 1442.

Pitchy-brown; clothed with a dense shining short pubescence: thorax equal, sinuated anteriorly, with the sides narrowly margined: elytra obsoletely, but irregularly, punctate-subrugose: legs and base of the antennæ testaceous.

Variable in colour; being found of a pale brown or ferruginous.

Not common throughout the metropolitan district.

Sp. 5. *hispidus*. *Fusco-piceus, antennis pedibusque testaceis, elytris obsolete punctato-striatis*. (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

An. *hispidum*. *Paykul*.—Cis *hispidus*. *Steph. Catal.* 143. No. 1443.

Pitchy-brown; clothed with a short rigid pubescence: thorax equal, sinuated anteriorly, with the sides narrowly margined: elytra obsoletely punctate-striate: legs and antennæ totally testaceous.

It varies like its congeners: sometimes the head and thorax alone, at others the entire body, are ferruginous or testaceous.

Found near London, and in Devonshire.

Sp. 6. *pyrrhocephalus*. *Rufo-fuscus, thorace valdè convexo, elytris pilosis, corpore subtùs femoribusque nigris*. (Long. corp.  $1\frac{1}{4}$  lin.)

Pt. *pyrrhocephalus*. *Marsham*.—Cis *pyrrhocephalus*. *Steph. Catal.* 143. No. 1444.

Red-brown: the head and anterior edge of the thorax rufous; the latter with the disc very convex, and black behind; elytra clothed with short flavescens hairs, irregularly punctured: body beneath and femora pitchy-black; tibiæ, tarsi, and antennæ rufous.

My specimens were obtained from the collection of Mr. Marsham.

Sp. 7. *pygmæus*. *Fusco-testaceus, thorace valdè convexo, antice truncato, elytris piceis subtilitèr vagè punctulatis.* (Long. corp. 1 lin.)

Pt. *pygmæus*. *Marsham.*—Cis *pygmæus*. *Steph. Catal.* 143. No. 1445.

Testaceous-brown; elongate, subglabrous: thorax very convex, equal, truncate anteriorly, with the sides slightly margined: elytra piceous, thickly and very finely, though irregularly, punctulated: antennæ and legs entirely testaceous.

Also from the Marshamian cabinet; “found near Reading.”—*Marsham*, i. 86.

Sp. 8. *rhododactylus*. *Niger, subvillosus, antennarum stipite tarsisque rufis.* (Long. corp. 1 lin.)

Pt. *rhododactylus*. *Marsham.*—Cis *rhododactylus*. *Steph. Catal.* 143. No. 1446.

lack: narrow, slightly glossy and a little villose: thorax equal, punctate: elytra obsoletely punctate: legs black, with the tarsi rufous; antennæ rufous at the base, with the capitulum black.

Of this species I likewise obtained a single example from the Marshamian collection.

Sp. 9. *nigricornis*. *Niger, thorace obscuro, elytris lævibus villosulis, pedibus rufo-testaceis, antennis nigris.* (Long. corp. 1 lin.)

Pt. *nigricornis*. *Marsham.*—Cis *nigricornis*. *Steph. Catal.* 143. No. 1447.

Black: thorax equal, obscure: elytra smooth, slightly villose: legs rufo-testaceous: antennæ black.

Found in Boleti near London; not common.

Sp. 10. *ruficornis*. *Niger, pilosus, thorace æquali marginato, antennis pedibusque rufis.* (Long. corp. 1 lin.)

Pt. *ruficornis*. *Marsham.*—Cis *ruficornis*. *Steph. Catal.* 143. No. 1448.

Black, pilose; the pubescence of a rufous hue: thorax obliquely truncate anteriorly, and slightly margined: elytra punctate: mouth, antennæ, and legs rufo-testaceous.

Taken near London, in June; apparently rather scarce.

Sp. 11. *nitidus*. *Piceus, nitidus, glaber, antennis pedibusque testaceis, thorace equali, anticè subsinuato, elytris obsoletius vagè punctatis.* (Long. corp. 1 lin.)

An. *nitidum*. *Fabricius*.—Cis *nitidus*. *Steph. Catal.* 143. No. 1449.

Piceous, shining, glabrous: thorax equal, punctate, somewhat sinuated anteriorly, with the sides and posterior edge slightly margined: elytra not broader than the thorax, very convex, glabrous, rather coarsely and irregularly punctate: legs and antennæ pale ferruginous or testaceous.

Sometimes of a pale ferruginous, with the elytra darker; or castaneous, or rufo-ferruginous, or pale testaceous, evidently arising from its state of maturity.

Very abundant in Boleti, on old trees in June, throughout the metropolitan district.

Sp. 12. *fronticornis*. *Brevis, convexus, rufo-piceus, albido pilosus, thorace subtilissimè, elytris fortius confertim vagè punctatis, pedibus totis rufo-testaceis.* (Long. corp.  $\frac{3}{4}$  lin.)

Apaté *fronticornis*. *Panzer*.—Cis *fronticornis*. *Steph. Catal.* 143. No. 1450.

Short, convex, rufo-piceous, clothed with a whitish down: the thorax above very convex, the anterior margin bisinuated, the disc finely punctured: elytra coarsely but irregularly punctured, the apex rather testaceous: legs entirely rufo-testaceous: antennæ pale, with the capitulum rather obscure. Male with the head bituberculate.

Rather scarce: I have taken the insect in Suffolk in September, and near Ripley in July, 1827.

Sp. 13. *bidentatus*. *Nigro-piceus, subnitidus, ferè glaber, valdè convexus, thorace elytrisque concinnè punctatis, antennis pedibusque rufo-testaceis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Pt. *bidentatus*. *Marsham*.—Cis *bidentatus*. *Steph. Catal.* 143. No. 1451.

Pitchy-black, slightly shining, and nearly glabrous, very convex: thorax deeply bisinuated anteriorly, the middle lobe prominent, and forming two hornlike processes in the male, the disc finely punctate: elytra as broad as the thorax, with the shoulders rounded, the disc thickly and finely punctured: antennæ and legs pale rufo-testaceous. Male with two erect acuminate spines on the head.

Variable in colour, like the rest of the genus.

Found gregariously in Boleti, during the months of June and July, in the vicinity of London, but rather local: I have found it

at Coombe and Darenth woods, and in Epping-forest. “Oakhampton, in Somersetshire.”—*Dr. Leach*. “Swansea.”—*L. W. Dillwyn, Esq.*

#### FAMILY XLI.—BOSTRICHIDÆ, *Leach*.

*Antennæ* with from six to eleven distinct articulations; the basal one generally elongate, and the terminal ones more or less incrassated, and forming a solid or perfoliated club. *Palpi* generally short, mostly conic, rarely filiform: *head* globose, sometimes produced anteriorly into a sort of rostrum; deeply inserted in the *thorax*, which is generally large, and frequently muricated: *body* mostly cylindric; sometimes truncate behind: *tibiæ* generally compressed, and frequently denticulated exteriorly; *tarsi* mostly tetramerous, the third joint sometimes bifid, in the pentamerous genera the fourth joint minute.

The Bostrichidæ—which may be instantly recognised from all the preceding insects of this group by their distinctly clavate antennæ, with the tendency of the head to become rostriform in front, and of the tarsi to be quadriarticulate—both in their larva and perfect states are exceedingly injurious to mankind from the havoc many of them commit on forest trees, the larva making divers tortuous and labyrinthiform paths between the bark and wood, and in some cases perforating the solid wood itself, to the total destruction of the trees: of their ravages an interesting account is given in the eleventh volume of Latreille’s *Histoire Naturelle des Crustacés*, &c.; by which, amongst other facts, which my limits compel me to omit, we learn that the females deposit from sixty to eighty eggs, and that as many as 80,000 larvæ have been calculated to inhabit a single tree: the females (at least of some of the species) appear to perforate the trees, and deposit their eggs as they proceed; and each larva, when born, proceeds nearly at a right angle to make a distinct perforation, the series when completed not unaptly having been compared to the apical portion of a broadly webbed feather, the excavation formed by each larva gradually diverging, so that as the animal increases in bulk, more space is acquired for it to proceed in without interfering with its neighbours:—the following are the indigenous genera:

Antennæ articulis	10, ca- pitulò	{ laminato. <i>Elytra</i> posticè	{ integrâ, simplices: 265. <i>RHYZOPERTHA</i> . retusa, spinosa: . 260. <i>SINOXYLON</i> .
	{ elongato, haud laminato, <i>Antennarum</i> artº. 2ndº.	{ elongato, cylindrico: . 262. <i>APATE</i> . vix elongato,	{ subgloboso: 263. <i>DINODERUS</i> . subclavato: 261. <i>BOSTRICHUS</i> .
	6, clavâ solidâ: . . . . .		266. <i>PLATYPUS</i> .
	{ 11, tarsi artº. } tertio	{ simplice. <i>Antennarum</i> capitulo	{ acuto: 264. <i>TRYPODENDRON</i> . orbiculato: . 267. <i>TOMICUS</i> .
	{ bifido. <i>Anten-</i> <i>narum</i> clava	{ 3 arta. } ovata, acuminata: . 268. <i>HYLESINUS</i> . compressa, obovata, rotundata: 269. <i>SCOLYTUS</i> .	{ 4-articulata: . . . 270. <i>HYLURGUS</i> .

GENUS CCLXI.—BOSTRICHUS, *Geoffroy*.

*Antennæ* inserted close to the anterior margin of the eyes; basal joint robust; second short, subclavate; third subcylindric; four following subtransverse;

GENUS CCLX.—SINOXYLON, *Dufschmid*.

*Antennæ* short, slender at the base, the club composed of three transverse sublaminated articulations. *Palpi* filiform, with the terminal joint elongate: *thorax* gibbous, cucullated: *body* short, villose, stout: *elytra* retuse, spinose: *legs* short: *tibiæ* simple: *tarsi* slender, simple.

The transverse sublaminated capitulum of the antennæ, retuse spinous elytra, and villose body, appear to be the chief external distinctions of this genus.

†Sp. 1. *bispinosum*. *Nigrum, villosum, thorace muricato, elytris rufo-fuscis posticè retusis dentatis*. (Long. corp.  $3\frac{1}{2}$  lin.)

Bo. *bispinosus*. *Olivier*, iv. 77. pl. 4. f. 1.—Si. *muricatum*. *Fabricius*, E. ii. 377.

Villose, black; thorax gibbous, muricated: elytra red-brown, or castaneous, retuse posteriorly and dentate, the dentations irregular. .

This insect having been incidentally (but improperly) noticed as a British species from confusion in the synonymy, is here inserted for the sole purpose of stating that it has no pretensions to such a claim, as from the mere circumstance of its omission a negative rather than a positive inference as to its native origin could be drawn.

eighth and ninth very large, obtrigonal, produced interiorly; tenth ovate-truncate, subcompressed. *Palpi* subfiliform, the apical joint slightly fusiform: *head* small, deflexed: *eyes* small, globose: *thorax* globose, muricated: *body* elongate-cylindric: *elytra* rounded at the apex: *legs* slender; *tibiæ* simple; *tarsi* simple, the third joint small.

I have reverted to the original appellation bestowed upon this genus by Geoffroy, as pursued by Latreille in his "Considerations, &c." the rule of priority being my maxim:—the present genus may be known from *Sinoxylon* and *Apate* by the antennæ, differing from the former by having the terminal joints not transverse nor laminated, and from the latter by the second joint being short and subclavate, not elongate and subcylindric: other characters might be pointed out, but the above are sufficient to discriminate the genus.

‡Sp. 1. *capucinus*. *Niger, opacus, subpubescens, elytris vagè reticulato punctatis, abdomineque rufis, thorace anticè subemarginato, tuberculato muricato.* (Long. corp. 5 lin.)

De. *capucinus*. *Linné*.—*Ap. capucinus*. *Steph. Catal.* 144. No. 1453.—*Curtis*, vi. pl. 271.

Black, opaque, slightly pubescent: *thorax* short, rugulose-punctate, the anterior margin impressed in the middle, and furnished at the sides with muricated tubercles: *elytra* irregularly reticulate-punctate, entirely of a light red or rufous, immaculate: *breast* and *base* of the *abdomen* black, the rest of the *abdomen* red: *legs* pitchy-black, with the *tarsi* red: *antennæ* piceous.

Rare: three specimens only, I believe, have hitherto been found in England; the first taken many years since in London, a second in Derbyshire, and the third on the coast of Norfolk, near Cromer.

## GENUS CCLXII.—*APATE*, *Fabricius*.

*Antennæ* short, inserted close to the eyes in front; the basal joint elongate, curved, robust; second more slender, elongate-cylindric; five following transverse, slender, subcoarctate, gradually incrassated; the remainder forming an elongate somewhat perfoliated club, of which the two basal joints are more or less conic, produced within, and the terminal one subovate, or elongate-ovate. *Palpi* rather long, the terminal joint elongate, subacuminate: *mandibles* exerted: *head* nutant, pilose anteriorly: *thorax* very large, subquadrate, gibbous, retuse in front, and muricated: *body* elongate-cylindric: *elytra* linear, retuse posteriorly: *legs* short; *tibiæ* slightly denticulate exteriorly, the anterior with a spine at the apex: *tarsi* simple.

From *Bostrichus*, the elongate-cylindric second joint of the an-



tennæ, as well as the retuse, more or less dentate or eroded posterior portion of the elytra, subquadrate thorax, the denticulated tibiæ, &c. distinguish this genus. *A. muricatum* being the typical species of the genus *Apate*, as originally established by Fabricius in his *Systema Entomologiæ*, it becomes necessary to employ his name for the present genus.

Sp. 2. *sinuata*.? PLATE XIX. f. 6.—*Nigro-picea, thorace muricato, elytris fuscis posticè retusis dentatis*. (Long. corp. 3 lin.)

*Ap. sinuata. Fabricius?*—*Ap. muricatus. Steph. Catal. 144. No. 1452; excluso synonymis.*

Pitchy-black: head very pilose: thorax anteriorly gibbous, with elevated muricate tubercles, the hinder portion very smooth, slightly depressed on each side at the base: elytra irregularly and coarsely punctate, retuse behind, with one small and two large tubercles on the disc of each, and the inner angle of the suture behind slightly tubercular: legs piceo-testaceous: antennæ rusty-ochraceous.

The only specimen I have seen of this insect was taken beneath the bark of a tree in Epping-forest, and is in my collection.

Sp. 1. *muricata. Nigra, elytris reticulatis, posticè retusis dentatis, thorace muricato gibbo.* (Long. corp. 8 lin.)

*Ap. muricata. Fabricius, E. ii. 378.*—*Bo. terebraus. Olivier, E. 77. pl. 1. f. 4.*—*De. muricatus. Linné. ii. 562.??*

Deep shining black: mouth with a dense fulvous pile: thorax somewhat opaque, gibbous, retuse in front, the sides muricate anteriorly, with several hooked teeth: elytra deeply reticulated, each with three obscure lines, becoming elevated posteriorly, and forming dentations towards the apex: abdomen clothed with a fulvous pile: club of the antennæ ferruginous.

I possess a specimen of this insect—which at first sight resembles a large *Sinodendron cylindricum*—taken about ten years since, at the foot of a poplar, in the Isle of Dogs:—it is decidedly an imported species, being a native of the West Indies and South America, and subsisting, as Pallas informs us, upon the sugar-cane. Had Mr. Curtis taken the pains to examine the descriptions of Linnæus, Fabricius, &c. both of *Apate* and *Sinodendron*, he would scarcely have given the confused account he has of the localities of this insect and *Sinoxylon bispinosum*, which he has rendered still more inaccurate by copying De Jean's reference to Olivier, as synonymous with the insect last mentioned:—the Linnæan insect can scarcely be the same as he says, the size of *Dermestes* (*Necrobis*) violacea.

GENUS CCLXIII.—DINODERUS\* *mihi*.

*Antennæ* inserted in front close to the eyes: the basal joint short, robust; the second subglobose; the five following minute, nodose, subcoarctate; the remainder forming an elongate perfoliated club, of which the two basal joints are conic-trigonate, slightly produced within, and the terminal one subglobose, compressed. *Palpi* short, terminal joint minute, conic: *mandibles* exerted, acute: *head* short, transverse, with the neck thick: *eyes* globose: *thorax* short, rounded, very gibbous, and rugose in front: *elytra* retuse posteriorly: *body* elongate, cylindric: *tibiæ* compressed, denticulated externally; *tarsi* short, simple.

Compared with the insects of the foregoing genera, the insects included in this are pygmies, but they agree in having the three terminal joints of the antennæ distinct, the thorax muricated, &c.; as they not only differ in the relative proportions of the respective articulations of the antennæ, but in the structure of the palpi, their exerted mandibles, compressed denticulated tarsi, &c.

Sp. 1. *substriatus*.? *Nigro-piceus, opacus, subpubescens, antennarum apice pedibusque rufo-piceis, elytris creberrimè punctatis.* (Long. corp.  $1\frac{1}{2}$  lin.)  
*Apate substriata*.—Paykul, *F.* iii. 142.?

Pitchy-black, opaque, slightly pubescent: head rugose-punctate, with a transverse impression between the antennæ; mouth ciliated with fulvous: thorax in front very globose and thickly tuberculated, the tubercles slightly acuminate and largest anteriorly: elytra inclining to castaneous, deeply and coarsely punctate, the punctures irregularly and closely placed, but rarely dis-

†Sp. 2. *ocellaris.* *Nigro-piceus, subnitidus, antennis pedibusque piceis, elytris punctatis, punctis ocellatis in striis digestis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Di.? *ocellaris mihi.*

Pitchy-black, slightly glossy; thorax tuberculate in front, punctate posteriorly: elytra rather deeply punctate, the punctures disposed in striæ, distinctly ocellated, and largest posteriorly: antennæ and legs piceous.

I have little doubt of this insect being congenerous with the foregoing, but the antennæ are broken.

Taken at "Little Chelsea in July last."—*Mr. Westwood.* It is probably exotic, having been found in a cup of coffee.

\* *Δεινός*, magnus; *δειγν*, collum.

posed in striæ: legs rufo-piceous, tibiæ and tarsi paler; club of the antennæ rufescent.

This singular insect agrees with the *Apate substriata* of Paykul, excepting in not having the puncta on the elytra disposed in striæ, and in being less pubescent.

I have a pair of this species from the New-forest.

# GENUS CCLXIV.—TRYPODENDRON \* *miki*.

*Antennæ* rather slender; the basal joint very long, slightly bent, clavate; the second robust, obconic; the third to the eighth very short, coarctate; the remainder forming an ovate compressed, triarticulate, obliquely acuminate club. *Palpi* very short: *mandibles* acute, dentate: *head* small, deflexed: *eyes* sublunate: *thorax* very large, gibbous, wide anteriorly: *body* short, subcylindric: *tibiæ* expanded at the apex and denticulated; *tarsi* very long, slender, simple, pentamerous.

The solid capitulum of the antennæ distinguishes this from the preceding genera, as does its acute termination from the following, excepting *Hylesinus*, from which it differs in having the tarsi simple:—the species are exceedingly destructive to trees, perforating deeply into the solid wood, but fortunately they are rare in Britain.

Sp. 1. *dispar*. *Nigro-piceum, longius pubescens, antennis tibiis tarsisque testaceis, elytris brunneis, punctato-striatis, apice dilutioribus*. (Long. corp.  $1\frac{1}{2}$ —2 lin.)

Bo. *dispar*. Illiger.—*Steph. Catal.* 144. No. 1454.

Pitchy-black, clothed with a long griseous pubescence: thorax large, suborbiculate, very convex in the female, anteriorly tuberculate: elytra brunneous, distinctly punctate-striate, the disc convex, sloping from the middle to the apex: femora piceous, with the apex testaceous: tibiæ and tarsi of the latter colour: antennæ pale testaceous. Female much larger than the male, with the thorax subglobose, the legs comparatively shorter, and the antennæ more slender.

My specimens of this insect I obtained from Mr. Bydder, who found them in the New-forest, near Lyndhurst.

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\* Τρυπανον, perforo; δειδρον, arbor.

Sp. 2. domesticum. *Cylindricum, nigrum, subglabrum, tarsis antennarumque clavâ, oblique acuminatâ, testaceis, elytris griseo-pallidis, suturâ limboque nigro-fuscis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

De. domesticus. Linné.—Bo. domesticus. Steph. Catal. 144. No. 1455.

Cylindric, black, nearly glabrous, punctulated: thorax very convex, tuberculate anteriorly: elytra narrower than the thorax, livid, or pale griseous, shining glabrous, obsolete punctate-striate, the suture and lateral margins broadly fuscous-black: legs black: tarsi, and sometimes the tibiæ at the apex, ferruginous: antennæ dusky at the base, the club testaceous.

I have one example from the Marshamian collection, and a pair found in the New-forest: said to be partial to the alder.

#### GENUS CCLXVI.—PLATYPUS, Herbst.

*Antennæ* composed of six joints, of which the terminal one forms a solid ovate, considerably compressed club: the three preceding joints are transverse, the second short, incrassated: the basal one elongate, robust, and curved. *Palpi* short: *mandibles* exerted, acute: *head* globose, anteriorly flat: *eyes* ovate, entire: *thorax* elongate, cylindric, with a lateral excavation to receive the anterior femora: *body* cylindric-linear: *elytra* truncate: *legs* long, compressed: posterior pair remote: *tibiæ* short, anterior deeply striated transversely without: *tarsi* pentamerous, longer than the femora and tibiæ united, very slender, the basal joint very long.

The singularly constructed six-jointed antennæ, of which the last articulation forms a solid capitulum, exerted mandibles, excised thorax, remote posterior legs, striated short anterior tibiæ, and elongated, slender, simple tarsi, form some of the leading characteristics of this singular genus.

#### GENUS CCLXV.—RHYZOPERtha\* mihî.

*Antennæ* with the capitulum triarticulate, the articulations sub laminate: *head* small, deeply inserted in the thorax, the latter very convex, scabrous in front: *body* cylindric: *elytra* elongate, entire: *tibiæ* serrated.

† Sp. 1. pusilla. *Cylindricua, piceo-ferruginea, elytris punctato-striatis integris.* (Long. corp.  $1\frac{3}{4}$  lin.)

Si. pusillum. Fabricius.—Pti. piceus. Marsham (!)—N. S. pusilla. Steph. Catal. 411. No. 1453. note.

Piceo-ferruginous: the thorax convex, scabrous in front: elytra glabrous, shining, punctate-striate: antennæ ferruginous.

Frequently taken by Marsham in roots and seeds from India; consequently it is not an indigenous species.

\* Ριζα, radix; περιθα, perdo.

Sp. 1. *cylindrus*. *Niger, elytris subcostatis profundè striatis, posticè villosis retusis, antennis pedibusque castaneis.* (Long. corp.  $3\frac{3}{4}$  lin.)

Ph. *cylindrus*. *Herbst.—Curtis, ii. pl. 51.—Steph. Catal. 145. No. 1467.*

Brownish-black, slightly villose: head anteriorly punctured and finely rugulose; thorax slightly punctulate, the back smooth, with an impressed line behind: elytra punctured, deeply striated, the interstices elevated: the apex retuse, dentate: antennæ and legs castaneous.

This singular insect was also discovered to inhabit Britain by that industrious collector, Mr. Bydder, who found it in some plenty in the New-forest: it has also, I believe, been found near Windsor; but it appears to be local.

## GENUS CCLXVII.—TOMICUS, *Latreille*.

*Antennæ* with the club commencing at the seventh joint; the basal joint robust, elongate, clavate; the second stout, short, obconic; third small, slender at the base; the three following very short, coarctate; the remainder forming a compressed, suborbiculate, transversely annulated club, of which the basal joint is largest. *Palpi* very short, the terminal joint ovate: *mandibles* triangular, acute, dentate within: *head* much deflexed: *thorax* very large, gibbous, much broader than the head in front: *body* cylindric: *tibiæ* broad at the apex, and serrated; *tarsi* with entire joints.

The genus *Tomicus* is principally to be distinguished by having a transversely annulated orbiculate club to the antennæ, the tarsi simple, and the body in general cylindric: it, however, contains insects of dissimilar form; I have, therefore, been obliged to divide it into sections.

### A. With the elytra entire behind, rounded.

#### a. *The thorax narrowed anteriorly.*

Sp. 1. *polygraphus*. *Fusco-piceus, pubescenti-scaber, antennis pedibusque pallidis, elytris vix striatis, antennarum clavâ subacuminatâ.* (Long. corp.  $1\frac{1}{4}$  lin.)

De *polygraphus*. *Linné.—To. polygraphus. Steph. Catal. 144. No. 1456. Var. To. affinis. Steph. Catal. 144. No. 1457.*

Fusco-piceous, pubescent, somewhat rugose: elytra obsoletely striated; antennæ and legs pale testaceous; the capitulum of the former subacuminate.

Slightly variable in colour; the *To. affinis* of my Catalogue being a pale (probably immature) variety.

This insect ill associates with the present genus. Rare; but has been captured near London.

b. *The thorax anteriorly broader than the head.*

Sp. 2. villosus. *Brunneus, subnitidus, longius pallido pilosus, thorace ovato, creberrimè æqualitèr punctato, elytris profundè punctato-striatis, interstitiis subtilius seriato-punctatis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

Bo. villosus. *Paykul.*—To. villosus. *Steph. Catal.* 144. No. 1458.

Brunneous, slightly shining, clothed with elongate pale-griseous hairs: thorax ovate, thickly and regularly punctate: elytra deeply punctate-striate, the interstices flat, and each with a row of minute impressions: antennæ and legs pale testaceous.

Also variable in colour, being more or less ferruginous, or pale testaceous.

Not very common in the vicinity of London: it also occurs in Somersetshire and Devonshire. “On the bark of oak, not uncommon (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 3. micrographus. *Ferrugineus, nitidus, subpubescens, thorace oblongo, anticè scabro, elytris subtilissimè punctato-striatis, apice obtusis, muticis.* (Long. corp.  $1\frac{1}{2}$  lin.)

Bo. micrographus. *Paykul.*—To. micrographus. *Steph. Catal.* 145. No. 1459.

Ferruginous, shining, slightly pubescent: thorax oblong, rough anteriorly and opaque, finely punctulated posteriorly, but towards the middle of the base nearly smooth and glossy: elytra very delicately punctate-striate anteriorly, the striæ nearly evanescent posteriorly.

The oblong thorax, nearly naked body, and scarcely striated elytra, are the chief characters of this insect.

Not common: I have found it near Hertford.

† Sp. 4. flavus. *Flavo-testaceus, subpubescens, thorace oblongo, crebrè punctato, elytris subtilissimè punctato-striatis.* (Long. corp.  $1\frac{1}{4}$  lin.)

To. flavus. *Wilkin MSS.*—*Steph. Catal.* 145. No. 1465.

Testaceous-yellow, slightly pubescent and glossy: the thorax oblong, produced anteriorly, the disc sprinkled throughout with rather coarse punctures: elytra faintly punctulate-striate, the interstices flat, each with a series of minute punctures: antennæ and legs pale ochraceous, or testaceous.

I believe the only known examples of this species were taken either in Norfolk or in the New-forest.

## B. With the elytra retuse behind, and frequently dentate.

a. *The elytra not dentate posteriorly.*

Sp. 5. fuscus. *Fusco-piceus, longius pubescens, thorace anticè, scabro, opaca, elytris cylindricis, confertissimè punctato-striatis.* (Long. corp.  $1$ — $1\frac{1}{3}$  lin.)

Ips fuscus. *Marsham.*—To. fuscus. *Steph. Catal.* 145. No. 1460.

Pitchy-brown, clothed with long hairs: thorax anteriorly rugose, opaque, posteriorly somewhat smooth, more shining and finely punctulated: elytra cylin-

dric, closely and delicately punctate-striate, the interstices having each a row of minute punctures, as in *To. villosus*; the apex retuse, unarmed: antennæ and legs testaceous, or rufescent.

Apparently rare: it has been taken in the neighbourhood of London, and in Devonshire and Cornwall. "Common (near Swansea)."—*L. W. Dillwyn, Esq.*

Sp. 6. pubescens. *Niger, subpubescens, antennis pedibusque flavescentibus, fronte villosâ.* (Long. corp.  $\frac{1}{2}$ — $\frac{3}{4}$  lin.)

*Ips pubescens. Marsham.—To. pubescens. Steph. Catal. 145. No. 1461.*

Black, slightly pubescent, nearly opaque: thorax ovate, delicately punctulated; elytra fuscous or somewhat testaceous, deeply crenate-punctate: antennæ and legs flavescent; head densely pubescent in front.

The minute size, nearly pubescent black body, and densely pilose head, distinguish this from the foregoing insect.

Not common: found in old trees within the metropolitan district, and in Norfolk. "Kew."—*Rev. T. T. Haverfield.*

b. *The elytra dentate posteriorly.*

Sp. 7. bidens. *Nigro-piceus, subnitidus, griseo-pubescens, elytris crebrè subtiliter punctato-striatis, apice truncato-retusis, singulo dente supero elongato, hamato.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

*Bo. bidens. Fabricius.—To. bidens. Steph. Catal. 145. No. 1462.*

Pitchy-black, slightly shining; clothed with a griseous pubescence: forehead convex, punctate: thorax scabrous and very pubescent in front, with an obsolete transverse impression in the middle, and somewhat glabrous and smoother behind: the back with a subcarinated longitudinal line: elytra closely and finely punctate-striate, the apex truncate-refuse, each with a single large slightly bent tooth on the upper edge of the excavation; antennæ and legs pale rufo-testaceous. Female with the elytra subretuse, and very obsoletely dentate.

The most abundant species of the genus: found in several places within the metropolitan district.

Sp. 8. Laricis. *Nigro-piceus, subnitidus, pallido-pilosus, elytris punctato-striatis, apice retusis, ambitu irregularitèr dentato, interstitiis striarum seriato-punctatis.* (Long. corp.  $1\frac{1}{4}$ —2 lin.)

*Bo. Laricis. Fabricius.—To. Laricis. Steph. Catal. 145. No. 1463.*

Pitchy-black, a little glossy; clothed with pale hairs: forehead obsoletely im-

pressed transversely: thorax rugose anteriorly, finely punctulated posteriorly; elytra cylindric, punctate-striate, the interstices flat, with a few remote and minute punctures disposed in striæ, the apex retuse, the retuse margin with several irregular denticulations: femora pitchy-black; tibiæ and tarsi pale brunneous: antennæ rufo-testaceous.

Frequents the larch, and is apparently scarce. "Windsor."—*Mr. Waterhouse.*

Sp. 9. monographus. *Cylindricus, brunneo-testaceus, nitidus, pallido pubescens, elytris subtilissimè obsoletè punctato-striatis, apice subretusis, singulo denticulis 3 aut 4, uno exteriori.* (Long. corp.  $1\frac{1}{4}$  lin.)

Bö. monographus. *Fabricius.*—To. monographus. *Steph. Catal.* 145. No. 1464.

Cylindric, testaceous-brown, shining, clothed with pale hairs: head small, obsoletely punctate: thorax finely granulated anteriorly, shining posteriorly, and delicately punctate: elytra obsoletely and faintly punctate-striate, with the apex somewhat retuse, bounded on each elytron with three or four denticulations: legs and antennæ testaceous.

Also rare: found near London.

Sp. 10. Typographus. *Nigro-piceus, vel testaceus, subnitidus, longius flavescenscenti-pilosus, elytris profundè striato-punctatis, apice truncato-retusis, singuli ambitû sex dentato, dente quarto majore.* (Long. corp. 3 lin.)

Ips Typographus. *De Geer.*—To. Typographus. *Steph. Catal.* 145. No. 1466.

Pitchy-black or testaceous, slightly shining, clothed with long flavescent hairs: thorax large, produced and scabrous anteriorly, somewhat smoother and finely punctured behind and in the middle: elytra somewhat remote from the thorax, deeply punctate-striate, with the interstices convex, smooth, the apex deeply truncate-retuse, the retuse margin with six dentations, the fourth denticulation largest; the base of the excavation rugose: antennæ and legs pitchy-ferruginous or testaceous.

Very rare: found beneath the bark of firs, excavating various labyrinthiform passages, fancifully resembling letters and other typographical characters, whence its name. "Under bark (near Swansea)."—*L. W. Dillwyn, Esq.*

#### GENUS CCLXVIII.—HYLESINUS, *Fabricius.*

*Antennæ* with an obovate club, evidently acuminate to the apex, and composed of three or four distinct articulations; the basal joint elongate, slightly bent, and clavate: the second subglobose, the intermediate to the club transverse.



*Palpi* very short: *mandibles* acute, stout, dentate within: *head* short, robust; *eyes* oblong: *thorax* stout, convex, sinuated behind: *body* short, ovate: *tibiæ* compressed, denticulate at the apex: *tarsi* with the penultimate joint bifid.

Hylesinus is a genus of rather variable aspect; nevertheless the species may be known by the bifid penultimate joint of their tarsi, united to their triarticulate, acuminate, club of the antennæ.

A. Body pubescent. a. *Body somewhat elongate.*

Sp. 1. *crenatus*. *Niger, thorace inæquali, granulato-punctato, elytris profunde crenato-striatis pedibusque piceis, antennis ferrugineis.* (Long. corp. 2—2½ lin.)

Hy. *crenatus*. *Fabricius*.—*Steph. Catal.* 146. No. 1468.

Black, punctured: *thorax* unequal, thickly and coarsely punctured: *elytra* piceous-black, very deeply crenate-striate, with the interstices rugose: *femora* and *tibiæ* piceous: *tarsi* and *antennæ* ferruginous or castaneous.

*Elytra* sometimes rufo-ferruginous; the result of immaturity.

Found occasionally under the bark of old trees near the metropolis, in Kensington-gardens, &c. “In an old ash near Penllergare.”—*L. W. Dillwyn, Esq.*

Sp. 2. *hæmorrhoidalis*. *Niger, capite glabro, antennis ferrugineis, elytris striatis posticè rufis.* (Long. corp. 1½ lin.)

Ips *hæmorrhoidalis*. *Marsham*.—Hy. *hæmorrhoidalis*. *Steph. Catal.* 146. No. 1469.

Black, opaque, punctured: *head* glabrous: *thorax* rather deeply punctured: *elytra* punctate-striate, black anteriorly, rufous at the apex: *body* beneath and *legs* black; *tarsi* and *antennæ* ferruginous.

Apparently scarce: I possess a specimen from the Marshamian cabinet, and others caught near London.

Sp. 3. *picipennis*. *Ater, thorace æquali obsoletè punctato, elytris nigro-piceis, antennis pedibusque rufo-ferrugineis.* (Long. corp. 1½ lin.)

Hy. *picipennis*. *Steph. Catal.* 146. No. 1470.

Deep black, somewhat opaque; *head* punctulate: *thorax* equal, obsoletely but finely punctured: *elytra* piceous, rather deeply crenate-striate, with the interstices punctate: *antennæ* and *legs* rufo-ferruginous.

Found near London; and in Lancashire.

b. *With the body very short and broad.*

Sp. 4. scaber. *Ater, antennis tarsisque rufis, elytris punctato-striatis hispidiusculis.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

Ips scaber. *Marsham.*—Hy. scaber. *Steph. Catal.* 146. No. 1471.

Deep black, slightly shining; very ovate, short: thorax rather coarsely and thickly punctulate; elytra rather deeply punctate-striated; with short rigid hairs in the interstices: abdomen deep black: legs black, with the tarsi beneath ferruginous.

Three or four examples only of this very distinct species have come beneath my observation: one I obtained from the Marshamian collection, and a second I captured at Ripley in July, 1827.—“Cobham.”—*A. Cooper, Esq.*

B. *With the body clothed with scales.*

Sp. 5. Fraxini. *Niger, subtus densè cinereo-pubescentis, suprè squamulis cinereis fuscisque variegatus, antennis ferrugineis, clavâ magnâ acuminatâ fuscâ.* (Long. corp.  $2-2\frac{1}{2}$  lin.)

Bo. Fraxini. *Panzer.*—Hy. Fraxini. *Steph. Catal.* 146. No. 1472.

Black; beneath densely clothed with an ashy pile, above variegated with cinereous and fuscous scales: antennæ ferruginous, with a large acuminate fuscous club: legs piceous: tarsi ferruginous.

Extremely variable in colour, being of different hues of black, piceous, ferruginous, or testaceous, sometimes ochraceous, with the legs and antennæ paler.

Very abundant in decayed ash-trees throughout the metropolitan district. “Black Hall wood.”—*T. C. Heysham, Esq.* “Common (near Swansea).”—*L. W. Dillwyn, Esq.*

Sp. 6. furcatus. *Brevis, fusco-ferrugineus, elytris lineâ obliquâ furcatâ annuloque ad apicem albis.* (Long. corp. 1 lin.)

Ips furcatus. *Marsham.*—Hy. furcatus. *Steph. Catal.* 146. No. 1473.

Dusky-ferruginous: thorax with three longitudinal, waved, interrupted whitish lines: elytra ferruginous; each with an oblique whitish line, terminating at the base, and furcate; at the apex is a whitish circle, and near the suture another whitish line: legs ferruginous.

Probably a variety of the foregoing; it is however much smaller.

From the Marshamian collection.

Sp. 7. coadunatus. *Fuscus, coleoptris rufescentibus, maculis obsoletiusculis coadunatis.* (Long. corp. 1 lin.)

Ips coadunatus. *Marsham.*—Hy. coadunatus. *Steph. Catal.* 146. No. 1474.

Head and thorax fuscous or black: elytra rufescent, striated, with two or three obscure spots upon each, continued on the suture: antennæ totally and legs rufous.

Not uncommon near London; at Hertford, Ripley, &c. "Under bark of rails near Sydenham."—*Mr. Ingpen*.

Sp. 8. *sericeus*. *Cinereus*, *elytris ferrugineo obscure nebulosis*, *pedibus fuscis*, *antennarum basi testaceo*. (Long. corp.  $\frac{7}{8}$  lin.)

*Ips sericeus*. *Marsham*.—*Hy. sericeus*. *Steph. Catal.* 146. No. 1475.

Above totally clothed with cinereous scales; the elytra ferruginous, obsoletely striated, and obscurely clouded with dusky: antennæ testaceous, with the capitulum fuscous: legs fuscous.

Apparently rare, as I have seen but few examples: it is found near London.

## GENUS CCLXIX.—SCOLYTUS, *Geoffroy*.

*Antennæ* with the club commencing at the ninth joint; the basal joint robust, a little elongate; second short, subglobose; the third to the eighth transverse; the remainder forming a compressed, ovate club, composed of closely united laminæ. *Palpi* unequal, the terminal joint somewhat elongate, slender: *mandibles* triangular, entire: *head* subglobose: *eyes* elongate, curved: *thorax* large, narrowed anteriorly: *elytra* cylindric, truncate: *abdomen* beneath obliquely and abruptly truncate: *tibiæ* compressed, simple, the external angle terminating in a curved spine; *tarsi* with the penultimate joint bifid.

The sublaminated, obscurely triarticulate, club of the antennæ of these insects, united to the bifid penultimate joint of the tarsi, the obliquely truncate, retuse, or submucronated abdomen, large thorax, &c., sufficiently characterize the present genus; of which the first species has become somewhat conspicuous from the injury it has recently created to the elm-trees in and about the metropolis.

Sp. 1. *Destructor*. *Niger*, *nitidus*, *antennis tarsisque rufo-testaceis*, *thorace subtilissimè punctulato*, *elytris punctato-striatis*, *interstitiis vagè punctulatis*, *abdomine subtus retuso*. (Long. corp.  $1\frac{1}{2}$ —3 lin.)

Sc. *Destructor*. *Olivier*.—*Curtis*, i. pl. 43.—*Steph. Catal.* 146. No. 1476.

Black, very glossy: head black, longitudinally rugose: thorax large, very finely punctulated: elytra glabrous, pitchy-black, or piceous, sometimes rufescent or bright ferruginous, glossy, punctate-striate; the interstices irregularly punctate: abdomen beneath retuse, the first segment being very convex and

obscurely mucronated: femora and tibiæ piceous black; tarsi and antennæ rufo-testaceous.

A great pest to the elm-trees near the metropolis, many of which in St. James's Park, at Chelsea, &c., have been totally destroyed by the ravages of this little insect: it likewise occurs at Hertford and Ripley. "Swansea."—*L. W. Dillwyn, Esq.*

Sp. 2. *picolor*. *Nigro-piceus, elytris confertissimè striatis, pedibus rufescentibus, abdomine inermi retuso.* (Long corp.  $1\frac{1}{2}$  lin.)

Sc. *picolor*. *Kirby MSS.—Steph. Catal. 146. No. 1477.*

Pitchy-black, shining: thorax elongate, punctulate; elytra rufescent, closely striated, the striæ obsoletely punctate: abdomen retuse, unarmed: legs and antennæ rufescent.

Thorax more coarsely punctured than in Sc. *pygmæus*.

Found near London: also "taken by Mr. Wilmot in wood at Wittersham near Rye."—*Marshall MSS.*

Sp. 3. *pygmæus*. *Niger, nitidus, antennis testaceis, pedibus rufo-piceis, elytris rufo-piceis, confertissimè punctato-striatis, thorace crebrius punctulato, abdomine retuso.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Sc. *pygmæus*. *Olivier.—Steph. Catal. 146. No. 1478.*

Black, shining, glabrous: head robust, granulated: thorax with the anterior margin sometimes ferruginous; the disc rather coarsely punctulate, especially towards the sides: elytra rufo-ferruginous, closely punctate-striate, the interstices each having a series of minute punctures: abdomen retuse, mucronate in the male: legs rufo-piceous: antennæ testaceous.

Much less abundant than the first species: found beneath the bark of oaks throughout the metropolitan district. "Under bark of elm, Copenhagen-fields."—*Mr. Ingpen.*

## GENUS CCLXX.—HYLURGUS, *Latreille*.

*Antennæ* with the club commencing at the eighth joint; the basal joint very long, bent, clavate, the second globose, third turbinate, four following transverse, the remainder forming a subglobose-ovate club. *Palpi* very short, terminal joint minute, subconic: *mandibles* acute, bidentate within: *head* more or less produced anteriorly: *eyes* elongate, narrow: *thorax* subcylindric-ovate, narrowed in front: *body* linear-cylindric: *tibiæ* compressed, denticulate at the apex; *tarsi* pentamerous, short, with the third joint cordate, bifid.

There is evidently considerable affinity between the insects of this genus and the Rhyncoli in the following family: like those insects the head is rostriform, the basal joint of the antennæ very

much elongate, and its pabulum congenerous: from the preceding genera of the present family this may be known by having the club of the antennæ quadriarticulate, the third joint of the tarsi (which are pentamerous) bifid, &c.

Sp. 1. piniperda. *Nigro-piceus, aut testaceus, brevius pubescens, elytris tenuè punctato-striatis, interstitiis punctulato-subrugosis, antennis tarsisque rufo-testaceis.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{3}{4}$  lin.)

De. piniperda. *Linné.*—Hy. piniperda. *Curtis, iii. pl. 104.*—*Steph. Catal. 147. No. 1479.*

Pitchy-black or testaceous, slightly pubescent: head and thorax very delicately punctured, the latter with the base a little waved, and having a transverse impressed line within: elytra subcylindric, faintly punctate-striate, with the interstices somewhat rugosely punctate: legs short, pitchy-black; tarsi pale testaceous: antennæ ferruginous.

Variable in colour; occurring of all intermediate hues from pale testaceous to nearly black, according to its state of maturity.

Frequents the Scotch fir, to the leading shoots of which it is exceedingly detrimental, the imago perforating them longitudinally and transversely, and also injuring the wood and bark of the trunk: it is abundant in fir woods near London. “Epping.”—*Mr. Doubleday.* “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 2. ater. *Elongatus, cylindricus, niger, nitidus, ferè glaber, antennis ferrugineis, rostro fronsque carinatis, thorace elongato, subcylindrico, vix carinato.* (Long. corp.  $2$ — $2\frac{1}{2}$  lin.)

Hyles. ater. *Fabricius.*—Hylur. ater. *Steph. Catal. 147. No. 1480.*

Elongate, subcylindric, black, glossy, nearly glabrous: head much produced anteriorly, with a longitudinal carina extending to the forehead: thorax elongate, subcylindric, thickly punctured, without a dorsal carina: elytra cylindric, coarsely crenate-striate, the interstices flat and transversely rugulose; and towards the apex rather scabrous: legs pitchy-black; the apex of the tibiæ, the tarsi, and antennæ rufo-piceous or castaneous.

Also common in fir plantations near London; in dry wood, under bark, &c.

Sp. 3. palliatus. *Brevior, nigro-piceus, subpubescens, thorace suprâ, elytris, tibiis, tarsis, antennarumque basi rufo-ferrugineis, thorace brevi, lateribus dilatato, suprâ carinato.* (Long. corp.  $1\frac{1}{2}$  lin.)

Hyles. palliatus. *Fabricius.*—Hylur. palliatus. *Steph. Catal. 147. No. 1481.*

Short, pitchy-black, somewhat pubescent: with the thorax above, the elytra, tibiæ, tarsi, and base of the antennæ, rufo-ferruginous: the thorax short,

with the sides dilated, the disc rugose-punctate, with a distinct carina down the middle: elytra somewhat deeply and coarsely crenate-striate: rostrum with an elevated carina.

Sometimes found of a pale testaceous, with the head above black, and the club of the antennæ fuscous.

Less abundant than the foregoing, but found in similar situations.

Sp. 4. *angustatus*. *Brevior, niger, subpubescens, antennarum basi tarsisque testaceis, elytris pedibusque piceis, thorace subcylindrico, evidentè carinato.* (Long. corp.  $1\frac{1}{4}$ — $1\frac{1}{2}$  lin.)

Bo. *angustatus*. *Herbst.*—Hy. *angustatus*.—*Steph. Catal.* 147. No. 1482.

Short, black, rather pubescent: rostrum not carinated: thorax subcylindric, a little narrowed in front, subopaque, punctulated, with a distinct longitudinal dorsal carina: elytra and legs piceous, the former opaque, deeply crenate-striate, with the interstices narrow, somewhat rugulose, and clothed with a few scattered cinereous depressed hairs: base of the antennæ and tarsi testaceous.

Also found of a pale rufo-testaceous hue, with the eyes brown, as in many of its congeners.

Not very common; it likewise frequents fir plantations. “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 5. *obscurus*. *Nigro-fuscus, elytris obscurè rubris profundè punctato-striatis, antennis pedibusque ferrugineis.* (Long. corp.  $1\frac{1}{4}$  lin.)

Ips *obscurus*. *Marsham.*—Hy. *obscurus*.—*Steph. Catal.* 147. No. 1483.

Short, obscure fuscous-black, slightly pubescent: thorax punctured, with an obscure dorsal carina: elytra obscure-rufous, or piceous, deeply punctate-striate, and clothed with short rigid hairs: abdomen fuscous: antennæ and legs ferruginous.

Much less, and comparatively broader, than the foregoing species.

Found beneath bark, in fungi, &c.: not very uncommon. “Swansea.”—*L. W. Dillwyn, Esq.*

Sp. 6. *rufescens*. *Subelongatus, toto piceo-rufescens, thorace carinato, elytris profundè crenato-striatis.* (Long. corp.  $1\frac{1}{2}$ — $1\frac{3}{4}$  lin.)

Hy. *rufescens*. *Steph. Catal.* 147. No. 1484.

Rather elongate; entirely of an obscure dull rufous; thorax cylindric, punctate, with an obscure dorsal carina: elytra rather deeply punctate-striate: antennæ and legs pale rufo-piceous.

Larger than the foregoing species, but rarely broader; of a different tint of colour; with the thorax less evidently carinated.

Taken within the metropolitan district; but seemingly not common.

Sp. 7. rufus. *Ferrugineo-rufus, antennis pedibusque dilutioribus, capite nigricanti, thorace haud carinato.* (Long. corp.  $1\frac{1}{4}$  lin.)

*Ips rufus.* Marsham.—Hy. rufus. *Steph. Catal.* 147. No. 1485.

Short, stout, dull rusty-red, pubescent: head slightly dusky or blackish: thorax punctured, but not carinated: the elytra very much punctulated, and rather deeply striated, the striæ composed of punctures: antennæ and legs pale rufescent.

Also found beneath bark, in fungi, &c., in the neighbourhood of London, Norfolk, &c.

Sp. 8. piceus. *Niger, elytris pedibusque rufo-piceis, thorace punctatissimo lineâ dorsali elevatâ.* (Long. corp.  $1-1\frac{1}{4}$  lin.)

*Ips piceus.* Marsham.—Hy. piceus. *Steph. Catal.* 147. No. 1486.

Head and thorax black, opaque, slightly pubescent; the latter very thickly and coarsely punctate, with an elevated longitudinal line: elytra dull piceous, striated, the striæ composed of very deeply impressed punctures: body beneath black: legs and antennæ piceous.

Found near London; not common.

Sp. 9. fuscescens. *Nigro-fuscus, obscurus, punctatissimus, thorace haud carinato, antennis rufo-testaceis.* (Long. corp. 1 lin.)

Hy. fuscescens. *Steph. Catal.* 147. No. 1487.

Narrow, fuscous black, obscure, somewhat pubescent, very thickly punctured: thorax without an elevated line: elytra deeply crenate-striated, the interstices rugose: legs black, with the tarsi rufescent: antennæ testaceous.

Smaller than either of the foregoing species, and differs from the following by its greater bulk and dissimilar colour and sculpture.

I believe this insect was taken near London, but am not certain.

Sp. 10. rhododactylus. *Nigro-piceus, pilis rigidis cinereis scaber, antennarum basi tarsisque ferrugineis, elytris profundè punctato-striatis.* (Long. corp.  $\frac{1}{2}$  lin.)

*Ips rhododactylus.* Marsham.—Hy. rhododactylus. *Steph. Catal.* 147. No. 1488.

Minute: black, or pitchy-black; clothed with rigid cinereous hairs: head piceous, punctate: thorax black, thickly punctate: elytra deeply punctate-striate, the interstices thickly clothed with pale rigid cinereous hairs: base of the antennæ and the tarsi ferruginous.

This pretty little insect is occasionally met with on heaths and commons near London, and in Suffolk.

## APPENDIX.

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- Page 5. *PTOMAPHAGUS truncatus*. "Not uncommon near Nottingham."—*Dr. Howitt*. "Stainton, &c."—*T. C. Heysham, Esq.*
- Page 6. *PTOMAPHAGUS Watsoni*. "One specimen only taken near Nottingham."—*Dr. Howitt*.
- Page 8. *CATOPS fornicatus*. "Great Barrock."—*T. C. Heysham, Esq.*
- Page 13. *CHOLEYA angustata*. "Rather uncommon."—*Dr. Howitt*. "Meldon Park, Northumberland."—*G. Wailes, Esq.*
- Page 17. *NECROPHORUS Sepultor*. "Once taken near Nottingham."—*Dr. Howitt*. "Dawlish, Devon."—*C. C. Babington, Esq.*
- Page 17. *NECROPHORUS Humator*. "Very common."—*Dr. Howitt*. "Newcastle and Meldon Park, common."—*G. Wailes, Esq.*
- Page 18. *NECROPHORUS Vestigator*. "Very abundant."—*Dr. Howitt*. "Newcastle and Meldon Park."—*G. Wailes, Esq.*
- Page 18. *NECROPHORUS interruptus*. "Rare; near Nottingham, specimens 12 lines in length."—*Dr. Howitt*. "Phillack, Cornwall, N. W. Hockin, Esq."—*C. C. Babington, Esq.*
- Page 19. *NECROPHORUS Mortuorum*. "Mansfield and Welbeck, Notts."—*Dr. Howitt*. "Monks-wood, Hants, and Buckley Vale, Devon."—*C. C. Babington, Esq.*
- Page 20. *NECROPHORUS Vespillo*. "Very common in Notts."—*Dr. Howitt*. "Newcastle and Meldon Park."—*G. Wailes, Esq.* "Rose Castle."—*T. C. Heysham, Esq.* "Monks-wood, Hants."—*C. C. Babington, Esq.*
- Page 21. *NECRODES littoralis*. *Curtis*, vii. pl. 334.—"In dead animals in the vale of Trent."—*Dr. Howitt*. "Meldon Park, Newcastle, sea-shore, Tyne-mouth, common."—*G. Wailes, Esq.*

It would scarcely be worth while to call the reader's attention to the great variations to which this insect is subject, were it not that the extreme varieties have been assumed to be distinct, and in the description thereof I allow sufficient cause so to consider them is apparent; but it is scarcely necessary to apprise the student that in every case where an animal is subject to great variation, a contrasted description of its more extraordinary varieties may give the semblance of specific difference: as an instance, the comparatively gigantic *Lucanus Cervus* may be mentioned;—in that insect, out of 50 examples, taken at random, the



probability is, that at least 5 or 6 *differ greatly* in points that in other groups of insects are dwelt upon almost with mathematical nicety, *e. g.* the structure of the mandibles, which, in *L. Cervus* (exclusively of other important distinctions in the dentation) in their most developed state, have the apex strongly furcate, the notch between the forks being *very deep*, while the same part is not only obtuse in the extreme case, but the centre is absolutely *more prominent* than the sides, whence we have a *depression* in place of an *elevation*, than which nothing can be more diametrically opposite:—thus it is with *Necrodes littoralis*, an insect, in its most developed state, exhibiting in the male highly incrassated and dentate posterior femora, incurved hinder tibiæ, dilated anterior and intermediate tarsi, various strongly sculptured impressions on the thorax, elevated elongate costæ on the elytra, &c., while, in the opposite case, the posterior femora are slender and simple, the hinder tibiæ straight, the intermediate tarsi less developed than the anterior, the sculpture on the thorax different, the costæ on the elytra abbreviated, and, in fine, every character less evident than in the larger individuals; but in the extensive series of the insect which I possess every intermediate shade is to be found, so that if there be *two species*, it would necessarily follow that the intermediate examples could belong to *neither*, and must consequently form a *third*; added to which fact, it may be stated that *no females* have yet been found to associate with such undeveloped (if so they may be termed) *males*, although ordinarily equally abundant with the opposite sex, a circumstance perfectly inexplicable when it is stated that the males of the so-called second species have been captured in Scotland, Norfolk, Kent, Devonshire, Surrey, South Wales, &c., were not the inference manifest that the alleged species was a mere variety of the male, a parallel case with that of *L. Cervus*, the small varieties of which remain in our cabinets in a state of celibacy.

Page 22. *OICEOPTOMA thoracica*. “Baron-wood, Armathwait, &c.”—*T. C. Heysham, Esq.* “Common in Notts.”—*Dr. Howitt.* “Meldon-park, Winton-le-wear, &c.”—*G. Wailes, Esq.*

Page 22. *OICEOPTOMA rugosa*. “Common in Nottinghamshire.”—*Dr. Howitt.* “Newcastle, &c., abundant.”—*G. Wailes, Esq.*

Page 23. *OICEOPTOMA sinuata*. “Common in Notts.”—*Dr. Howitt.* “Prestwick Car.”—*G. Wailes, Esq.*

Page 23. *OICEOPTOMA dispar*. “Caernarvon, N. Wales, N. W. Hockin, Esq.”—*C. C. Babington, Esq.*

Page 24. *SILPHA 4-punctata*. “Kensington-gardens.”—*A. Cooper, Esq.* “Baron-wood and Crosby-upon-Eden.”—*T. C. Heysham, Esq.*

Page 25. *SILPHA obscura*. “Nottingham-forest, very local.”—*Dr. Howitt.* “Summit of Skiddaw, in company with *Leistus montanus* and *Helobia Marshallana*.”—*G. Wailes, Esq.* “Cambridge.”—*C. C. Babington, Esq.*

Page 25. *SILPHA tristis*. “Has once occurred in Notts.”—*Dr. Howitt.* “Meldon Park.”—*G. Wailes, Esq.*

Page 26. *SILPHA nigrita*. “Extremely common throughout the county of Notts.”—*Dr. Howitt.* “Newcastle, &c.; very abundant.”—*G. Wailes, Esq.*

- Page 26. *SILPHA reticulata*. "Mansfield Forest, once taken by Mr. Smith."  
—*Dr. Howitt*. "Cambridge."—*C. C. Babington, Esq.*
- Page 27. *SILPHA opaca*. "Nottingham Forest, in March."—*Dr. Howitt*.  
"Newcastle."—*G. Wailes, Esq.* "Sandsfield."—*T. C. Heysham, Esq.*
- Page 27. *SILPHA lævigata*. "Sea-shore, Marsden; not very abundant."—*G. Wailes, Esq.*
- Page 28. *PHOSPHUGA atrata*. "Very common in the neighbourhood of Carlisle."—*T. C. Heysham, Esq.* "Occurs in profusion during some seasons."—*Dr. Howitt*. "Newcastle, Meldon Park, &c.; abundant."—*G. Wailes, Esq.*
- Page 32. *NITIDULA punctatissima*. "Very abundant in ashes."—*G. Wailes, Esq.*
- Page 33. *NITIDULA grisea*. "Cuddock."—*T. C. Heysham, Esq.* "Under bark of willows, common in Notts."—*Dr. Howitt*.
- Page 33. *NITIDULA depressa*. "Rose Castle."—*T. C. Heysham, Esq.*
- Page 34. *NITIDULA Colon*. "Abundant in Notts."—*Dr. Howitt*.
- Page 34. *NITIDULA discoidea*. "Abundant in Notts."—*Dr. Howitt*.
- Page 35. *NITIDULA bipustulata*. "Common in Notts."—*Dr. Howitt*. "Moss band."—*T. C. Heysham, Esq.*
- Page 35. *NITIDULA rufipes*. "Rare in Notts."—*Dr. Howitt*.
- Page 37. *NITIDULA villosa*. "Common in flowers."—*Dr. Howitt*.
- Page 42. *STRONGYLUS strigatus*. PLATE xvi. f. 5.—This figure having been taken from the *original* Marshamian specimen of *Ni. undata*, but the reference to the plate was inadvertently attached to the following insect, which might have been readily seen had Mr. Curtis read the description of the two insects, instead of merely glancing at the figure.
- Page 43. *STRONGYLUS imperialis*, dele PLATE xvi. f. 5.—*Curtis, viii. pl. 339*.  
"Under bark of aspen, Wanstead."—*A. Cooper, Esq.*
- Page 44. *STRONGYLUS ferrugineus*. The type of the genus *OSTOMA* hairchart is *Pelris ferruginea*, not this insect. "Welbeck, Notts, 1828, Mr. Marlow."—*Dr. Howitt*. "Gibside."—*G. Wailes, Esq.*
- Page 45. *CAMPTA lutea*. "High Bickington, Devon."—*T. Cocks, Esq.* This species, as marked in my Catalogue, forms a portion only of the genus *CYCHRAMUS* of Kugellan.
- Page 45. *MELIGETHES rufipes*. "Common in Notts."—*Dr. Howitt*.
- Page 46. *MELIGETHES viridescens*. "Eden Bridge."—*T. C. Heysham, Esq.*
- Page 51. *CATERETES bipustulatus*. "Once taken by Mr. Marlow."—*Dr. Howitt*.
- Page 55. *MICROPEPLUS porcatus*. "Moss, Meldon Park, &c."—*G. Wailes, Esq.*  
"Once taken in Notts."—*Dr. Howitt*. "Holm-gate, and near the Deanery, Carlisle."—*T. C. Heysham, Esq.* "Lincoln's-inn-fields."—*Mr. Ingpen*. "Cobham Park."—*A. Cooper, Esq.* The concluding observation from Mr. Westwood should have been attached to the following insect.
- Page 56. *MICROPEPLUS staphylinoides*. "Meldon Park."—*G. Wailes, Esq.*

- Page 62. *ANISARTHRIA minutissima*. "Bottisham."—*Rev. L. Jenyns*.
- Page 66. *ATOMARIA atricapilla*. "Bottisham."—*Rev. L. Jenyns*.
- Page 66. *ATOMARIA hirta*. "Damp cellars, abundantly, at Bottisham."—*Rev. L. Jenyns*.
- Page 66. *ATOMARIA castanea*. "Bottisham."—*Rev. L. Jenyns*. "Rather abundant in cellars, Nottingham."—*Dr. Howitt*.
- Page 67. *ATOMARIA nigripennis*. "Very abundant in cellars, Nottingham."—*Dr. Howitt*.
- Page 67. *ATOMARIA mesomelus*. "Cardew-mire."—*T. C. Heysham, Esq.*
- Page 69. *ATOMARIA nigriventris*. "Bottisham."—*Rev. L. Jenyns*.
- Page 71. *TYPHÆA ferruginea*. "Bottisham."—*Rev. L. Jenyns*.
- Page 71. *TYPHÆA tomentosa*. "Bottisham."—*Rev. L. Jenyns*.
- Page 72. *ANTHEROPHAGUS pallens*. "Bottisham, Ely, &c., not unfrequent."—*Rev. L. Jenyns*. "Tunbridge-wells."—*J. G. Children, Esq.* "High Bickington, Devon."—*T. Cocks, Esq.*
- Page 75. *CRYPTOPHAGUS Lycoperdi*. "Bottisham."—*Rev. L. Jenyns*.
- Page 76. *CRYPTOPHAGUS fumatus*. "Bottisham."—*Rev. L. Jenyns*.
- Page 77. *CRYPTOPHAGUS cellaris*. "Bottisham."—*Rev. L. Jenyns*.
- Page 78. *CRYPTOPHAGUS serratus*. "Coombe-wood, Armathwait."—*T. C. Heysham, Esq.*
- Page 80. *BYTURUS tomentosus*. "Common every where in Cambridgeshire, in the spring, on the flowers of the whitethorn."—*Rev. L. Jenyns*. "Common in Notts."—*Dr. Howitt*.
- Page 81. *MYCETÆA fumata*. "Extremely abundant in decayed wood in the deep rock cellars at Nottingham in Oct. and Nov."—*Dr. Howitt*.
- Page 84. *MYCETOPHAGUS 4-pustulatus*. "Old willows, Plaistow marshes."—*A. Cooper, Esq.* "In Boleti and rotten wood, Ely and Bottisham."—*Rev. L. Jenyns*.
- Page 85. *MYCETOPHAGUS atomarius*. "In Sphæria Fraxinea, near Bath, May 30."—*C. C. Babington, Esq.*
- Page 86. *MYCETOPHAGUS variabilis*. "Oaks, Copenhagen-fields."—*A. Cooper, Esq.*
- Page 88. *TRIPLAX russica*. "Common about Bottisham, in fungi."—*Rev. L. Jenyns*. "On ash-trees near Nottingham."—*Dr. Howitt*.
- Page 89. *TRIPLAX ænea*. "Meldon Park."—*G. Wailes, Esq.*
- Page 91. *TETRATOMA Fungorum*. "In February, under willow bark, Walthamstow."—*A. Cooper, Esq.*
- Page 92. *ENGIS rufifrons*. "Occasionally in profusion near Nottingham."—*Dr. Howitt*.
- Page 95. *NEMOSOMA elongatum*. *Curtis, vii. pl. 327.* "One specimen beaten

- out of a *bramble*-bush, in 1828, at Colwich, near Nottingham."—*Dr. Howitt*.  
 "Sometimes without the apical red spot on the elytra."—*Mr. Ingpen*.
- Page 96. *CERYLON histeroides*. "Black Hall woods."—*T. C. Heysham, Esq*  
 "Under the bark of willows in the spring, in Notts."—*Dr. Howitt*.
- Page 97. *TRIBOLIUM castaneum*. I have obtained this insect from India direct.
- Page 100. *RHYZOPHAGUS ferrugineus*. "Beaumont."—*T. C. Heysham, Esq*.  
 "Under bark of felled beeches in Meldon Park, April, and in Dec. 1830."—*G. Wailes, Esq*.
- Page 101. *RHYZOPHAGUS bipustulatus*. "Harraby."—*T. C. Heysham, Esq*.
- Page 106. *CORTICARIA pubescens*. "In damp cellars, Nottingham."—*Dr. Howitt*.
- Page 111. *LATRIDIUS lardarius*. "City walls, Carlisle, near the Deanery."—*T. C. Heysham, Esq*.
- Page 111. *LATRIDIUS ruginellus*. "Moss, Humby, Lincolnshire, Dec. 1829."—*A. H. Davis, Esq*.
- Page 112. *LATRIDIUS transversus*. "Bottisham."—*Rev. L. Jenyns*.
- Page 113. *LATRIDIUS porcatus*. "Under bark and in cellars at Nottingham, common."—*Dr. Howitt*.
- Page 114. *LATRIDIUS ruginellus*. "Eden Bridge."—*T. C. Heysham, Esq*.
- Page 115. *LATRIDIUS elongatus*. "Moss, Humby, Lincolnshire, abundantly."—*A. H. Davis, Esq*.
- Page 116. *XYLOTROGUS brunneus*. "One specimen captured in a shop window in Nottingham, 1829."—*Dr. Howitt*.
- Page 117. *LYCTUS oblongus*. "Very abundant during the summer, in Notts."—*Dr. Howitt*. "Bottisham."—*Rev. L. Jenyns*.
- Page 121. *DERMESTES lardarius*. "Newcastle and York."—*W. C. Hewitson, Esq*. "Epping."—*Mr. Doubleday*. "Extremely common in Notts."—*Dr. Howitt*.
- Page 122. *DERMESTES murinus*. "Newstead and Mansfield Forests, in dead birds."—*Dr. Howitt*. "Epping."—*Mr. Doubleday*. "New-walk, York."—*W. C. Hewitson, Esq*.
- Page 125. *MEGATOMA undata*. "Once taken in an old ash-tree near Nottingham by Mr. Smith."—*Dr. Howitt*.
- Page 126. *ATTAGENUS pello*. "Common in fellmongers' warehouses, &c., at Nottingham."—*Dr. Howitt*. "Meldon Park."—*G. Wailes, Esq*. "Common in old houses at Carlisle."—*T. C. Heysham, Esq*.
- Page 129. *ANTHRENUS Musæorum*. "Common at Nottingham."—*Dr. Howitt*. "Gibside, on flowers."—*G. Wailes, Esq*.
- Page 132. *TRINODES hirtus*. "Windsor, out of an oak."—*J. H. Griesbach, Esq*.

- Page 136. *BYRRHUS pilula*. "Very common in Notts."—*Dr. Howitt*.
- Page 137. *BYRRHUS fasciatus*. "Also common in Notts."—*Dr. Howitt*.
- Page 138. *BYRRHUS sericeus*. "Nottingham in the autumn."—*Dr. Howitt*.
- Page 138. *BYRRHUS murinus*. "Cobham."—*A. Cooper, Esq.* "Once taken in company with *B. sericeus*."—*Dr. Howitt*.
- Page 138. †Sp. 9. *BYRRHUS æneus*. *Oblongo-ovatus, supra æneus, griseo-pubescent, scutello albido, elytris vagè punctatis.* (Long. corp.  $2\frac{1}{4}$  lin.)
- By. *æneus*. *Fabricius, E. ii. 105.—Panzer, F. xci. f. 3.*
- Oblong-ovate, shining brassy-green above, with a cinereous pubescence: forehead convex, punctured: thorax short, very convex, punctulated: scutellum whitish: elytra very convex, irregularly punctate, but not striated: body clothed beneath with a dense ashy pile: antennæ pitchy-black.
- The only examples I have seen of this insect were captured near Edinburgh by *J. Wilson, Esq.*
- Page 139. *SIMPLOCARIA concolor*. *Vide vol. ii. p. 197.*
- Page 140. *SIMPLOCARIA semistriata*.—*Curtis, vii. pl. 335.* "In dry banks in the autumn, in Notts."—*Dr. Howitt*.
- Page 143. *ONTHOPHILUS striatus*. "Meldon Park."—*G. Wailes, Esq.* "Very abundant in the spring of 1830 in Nottingham Forest."—*Dr. Howitt*.
- Page 143. *ONTHOPHILUS sulcatus*. "Coombe-wood, in June."—*Mr. Ingpen.* "Has twice occurred in Notts."—*Dr. Howitt*.
- Page 144. *HISTER merdarius*. "Occurs occasionally in the Forest."—*Dr. Howitt*.
- Page 145. *HISTER unicolor*. "Common in Notts."—*Dr. Howitt.* "Newcastle, &c."—*G. Wailes, Esq.*
- Page 146. *HISTER cadaverinus*. "Common in Notts."—*Dr. Howitt.* "Meldon Park, &c."—*G. Wailes, Esq.*
- Page 147. *HISTER 12-striatus*. "Rather frequent in the Forest."—*Dr. Howitt*.
- Page 148. *HISTER bimaculatus*. "Newcastle and Marsden."—*G. Wailes, Esq.*
- Page 150. *HISTER neglectus*. "Two specimens taken on the sand in the Forest."—*Dr. Howitt*.
- Page 150. *HISTER carbonarius*. "Newcastle, &c."—*G. Wailes, Esq.* "Very abundant in Notts."—*Dr. Howitt.* "Bottisham, and Newmarket heath."—*Rev. L. Jenyns.*
- Page 152. *HISTER purpurascens*. "Very common in sandy places in Notts."—*Dr. Howitt.* "Brugh Marsh."—*T. C. Heysham, Esq.* "Near York."—*W. C. Hewitson, Esq.*
- Page 152. *HISTER castanipes*. "A few specimens taken during the last season."—*Dr. Howitt*.

- Page 153. *HISTER nitidulus*. "Very abundant."—*Dr. Howitt*.
- Page 154. *HISTER æneus*. "Newcastle."—*G. Wailes, Esq.* "Abundant in Notts."—*Dr. Howitt*.
- Page 155. *HISTER maritimus*. "Stockton-on-Tees."—*Rev. G. T. Rudd*.
- Page 157. *HISTER virescens*. "Once taken by Mr. Marlow at Welbeck."—*Dr. Howitt*. "Sea-shore, Marsden."—*G. Wailes, Esq.*
- Page 159. *DENDROPHILUS punctatus*. "I have one specimen of this species, taken in a dead bird in the Forest in 1828."—*Dr. Howitt*.
- Page 165. *DORCUS parallelipedus*. "Extremely abundant in the roots of decayed ashes in the spring."—*Dr. Howitt*. "Bath."—*C. C. Babington, Esq.*
- Page 166. *LUCANUS Cervus*. Very common at Shorne in Kent, and known by the name of the "*Shorne Bug*."
- Page 167. *SINODENDRON cylindricum*. "Common in decayed ash and willow trees all the year."—*Dr. Howitt*. "Meldon Park, Wallington, &c."—*G. Wailes, Esq.*
- Page 172. *ONTHOPHAGUS medius*. "Mansfield Forest, one specimen."—*Dr. Howitt*.
- Page 173. *ONTHOPHAGUS cœnobita*. "Farningham, in Kent."—*Mr. Ingpen*. "Rare near Nottingham."—*Dr. Howitt*.
- Page 175. *ONTHOPHAGUS nuchicornis*. "Abundant in the spring; and in the autumn of 1830."—*Dr. Howitt*.
- Page 176. *ONTHOPHAGUS ovatus*. "Mansfield; not found near Nottingham."—*Dr. Howitt*. "Farningham, in Kent."—*Mr. Ingpen*.
- Page 180. *TYPHÆUS*. The genus *Ceratophyus* (*Cerophayus* Lat.) Fischer is scarcely synonymous with the present, *Sc. dispar*, Fab., being the type.
- Page 180. *TYPHÆUS vulgaris*. "Common throughout the Forest district of Notts."—*Dr. Howitt*.
- Page 182. *GEOTRUPES vernalis*. "In profusion on the side of Skiddaw."—*G. Wailes, Esq.* "Mansfield Forest, very abundant last spring, but local."—*Dr. Howitt*.
- Page 182. *GEOTRUPES lævis*. "Whinlath, Cumberland."—*G. Wailes, Esq.*
- Page 183. *GEOTRUPES niger*. "Common in the Forest near Nottingham."—*Dr. Howitt*.
- Page 184. *GEOTRUPES puncticollis*. "Nottingham Park and Forest, but not common."—*Dr. Howitt*.
- Page 185. *GEOTRUPES stercorarius*. "Common in the Trent meadows."—*Dr. Howitt*. "Very abundant in Northumberland."—*G. Wailes, Esq.*
- Page 187. *APHIDIUS Fossor*. "Meldon Park, Tynemouth, &c. common."—*G. Wailes, Esq.* "Very common in Notts."—*Dr. Howitt*.

- Page 188. *APHODIUS subterraneus*. "Meldon Park, Marsden, &c."—*G. Wailes, Esq.* "Common in Notts."—*Dr. Howitt*.
- Page 188. *APHODIUS hæmorrhoidalis*. "In Notts, common."—*Dr. Howitt*.
- Page 188. *APHODIUS erraticus*. "Keswick."—*G. Wailes, Esq.* "Notts, common."—*Dr. Howitt*.
- Page 189. *APHODIUS fimetarius*. "Abundant in Northumberland."—*G. Wailes, Esq.* "Common in Notts."—*Dr. Howitt*.
- Page 190. *APHODIUS fœtens*. "Sea-shore, Marsden."—*G. Wailes, Esq.*
- Page 190. *APHODIUS scybalarius*. "Notts, common."—*Dr. Howitt*. "Dilston, Tynemouth, &c."—*G. Wailes, Esq.*
- Page 190. *APHODIUS rufescens*. "Sea-shore, Marsden."—*G. Wailes, Esq.*
- Page 197. *APHODIUS granarius*. "Meldon Park."—*G. Wailes, Esq.*
- Page 199. *APHODIUS porcus*. "Not uncommon near Nottingham."—*Dr. Howitt*. "Robin Hood lane, Coombe-wood."—*Mr. Ingpen*.
- Page 200. *APHODIUS rufipes*. "Meldon Park, Tynemouth, Marsden, &c. very abundant."—*G. Wailes, Esq.* "Common near Nottingham."—*Dr. Howitt*.
- Page 201. *APHODIUS nigripes*. "Nottingham, common."—*Dr. Howitt*.
- Page 201. *APHODIUS luridus*. "Keswick."—*G. Wailes, Esq.* "Nottingham, common."—*Dr. Howitt*.
- Page 202. *APHODIUS contaminatus*. "Newcastle, &c. abundant."—*G. Wailes, Esq.* "Common all the year at Nottingham."—*Dr. Howitt*.
- Page 203. *APHODIUS sphacelatus*. "Meldon Park, &c. abundant."—*G. Wailes, Esq.*
- Page 204. *APHODIUS merdarius*. "Newcastle, Dilston, &c. common."—*G. Wailes, Esq.* "Very common during the summer months."—*Dr. Howitt*.
- Page 219. *SERICA brunnea*. "Occasionally taken in the Forest."—*Dr. Howitt*.
- Page 221. *AMPHIMALLA solstitialis*. "Extremely abundant towards the end of June and beginning of July, in Nottingham Park, and the field to the north of the town."—*Dr. Howitt*.
- Page 222. *MELOLONTHA vulgaris*. "Common in Notts, and the neighbouring counties."—*Dr. Howitt*.
- Page 224. *PHYLLOPERTHA Horticola*. "Very common: the dark varieties not uncommon during the summer of 1830."—*Dr. Howitt*.
- Page 227. *ANISOPLIA Agricola*. "The abdomen and elytra of this species were once found on the sea-shore near South Shields."—*G. Wailes, Esq.*
- Page 227, note. The re-discovery of *Chrysomela cerealis* is due to the Rev. S. Hey, who, as he informs me, directed his friend and neighbour Mr. Fox to the locality.

Page 228. *HOPLIA argentea*. "Rare near Nottingham."—*Dr. Howitt*.

Page 232. *VALGUS hemipterus*. The communication from Mr. Wailes should have been placed to No. 1203 (instead of 1202, as given by a slip of *his* pen).

Page 233. *CETONIA aurata*. "Crowford and Matlock, Derbyshire, and Mansfield, Notts."—*Dr. Howitt*. "Salisbury."—*Mr. Ingpen*.

Page 244. *ELATERIDÆ*. My friend J. E. Gray, Esq. informs me that Eschscholtz has recently given a new arrangement of this family, in which he has divided it into several genera, giving types of each; but I have hitherto been unsuccessful in obtaining a view of the work, which Mr. Gray saw in Germany:—he also informs me that in another work of the above writer he quotes *E. murinus*, *fasciatus*, and *varius* as belonging to the genus *LEPIDOTUS*, Megerle.

Page 258. *ELATER ustulatus*. "Tunbridge Wells."—*J. G. Children, Esq.*

Page 265. *CTENICERUS pectinicornis*. "Meldon Park, common."—*G. Wailes, Esq.*

Page 266. *CTENICERUS cupreus*. "Meldon Park, common."—*G. Wailes, Esq.*

Page 267. *CTENICERUS tessellatus*. "Sea-shore, Tynemouth."—*G. Wailes, Esq.*



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## ERRATA.

- Page 6, line 18, *for equal, read subequal.*  
 21, — 17, *for Curtisis, read Curtisi.*  
 50, — 5 from bottom, *for larger, read longer.*  
 59, in table, *for ulæ, read Mandibulæ.*  
 —, — 11 from bottom, *for min ut, read minute.*  
 84, — 3, *for Heniault, read Hainault.*  
 113, — 10 from bottom, *for Kybes, read Kyber.*  
 120, — 15, *for Megatoma, read Ctesias.*  
 134, — 3 from bottom, *for fasciolated, read fasciculated.*  
 157, — 4, *for His. maragdulus, read Hi. smaragdulus.*  
 169, — 5 from bottom, *for elytra, read labrum.*  
 193, — 21 and 23, *for stiticus, read sticticus.*  
 278, — last line, *for fovea, read foveæ.*  
 291, — 9 from bottom, *for festiva, read festivus.*  
 317, — 12, *dele griscis.*  
 351, — 18 from bottom, *for terebraus, read terebrans.*  
 — bottom line, *for violacea, read violaceus.*

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